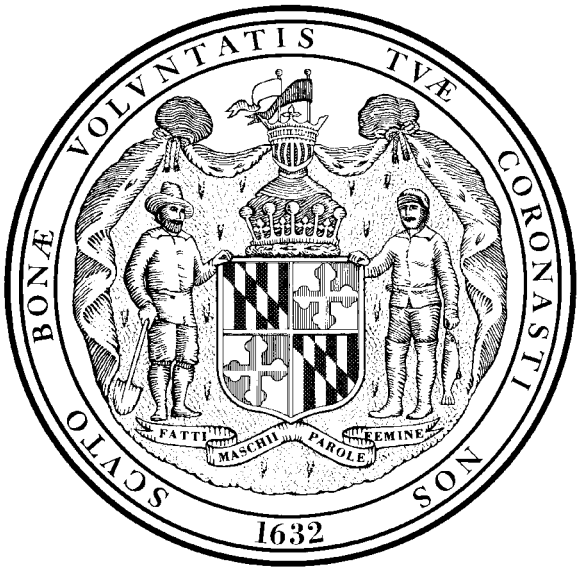
Special Committee on Voting Systems and Election Procedures in Maryland



Report and Recommendations

February, 2001

Special Committee on Voting Systems and Election Procedures in Maryland

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Secretary of State

The Honorable F. Vernon Boozer
Vice Chair

The Honorable Julian L. Lapides
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The Honorable Michael J. Collins
Senate of Maryland

The Honorable Joan Carter Conway
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PREFACE

The right to vote is the essence and foundation of the constitutional framework of our federal and state governments in the United States. The American Revolution was sparked by the desire for self-determination to choose governmental leaders and to retain control over the form and substance of government. The paramount nature of the right of self-determination was clearly manifested in the 1776 Annapolis deliberations which resulted in the adoption of the Maryland Declaration of Rights and the Constitution of the State of Maryland. The first article of the Maryland Declaration of Rights expressly provides "that all Government of right originates from the People," recognizing the fundamental right of citizens to participate fully in their government. The right of suffrage is set forth in Article I of the Constitution of Maryland, placed significantly ahead of the provisions outlining the branches and levels of government and their respective duties and responsibilities.

The continuous expansion of suffrage in Maryland — prompted by social change, moral imperatives, economic reality, and often bloody conflict — defines, in many respects, the history and maturation of our state as well as our country. The recognition of the sanctity and power of the right to vote requires that its exercise not be diminished or impaired. The "right to vote" is at the center of the controversy surrounding the 2000 Presidential Election, an election which was marred by the denial and exclusion of eligible citizens from voting, dubious ballot designs which misled or confused many voters, inadequate voting systems which failed to count votes accurately, and both flawed election procedures and judicial processes which failed to provide adequate and timely remedies. Accordingly, it is mandatory that all possible steps be taken to ensure that every eligible citizen in Maryland, at least, has the unfettered opportunity to vote and that the mechanics of voting and election procedures facilitate – not frustrate – the free exercise of the right to vote.

It has been a pleasure and an honor to serve as the Chair of the Governor's Special Committee on Voting Systems and Election Procedures. I appreciate the trust and confidence of

the Governor in assigning me this task and responsibility. It was enjoyable to work with the Special Committee members who approached this assignment with keen interest and diligence. I commend the sincere, hard working, and dedicated members and staff of the State Board of Elections and the Local Boards of Election; I thank them for their prompt, thorough and cooperative responses to the Special Committee's requests. This report could not have been compiled and completed without their assistance. Special recognition is due for Nikki Baines Trella, counsel to the Special Committee, whose organizational skills, conscientiousness, and dedication to the project kept the Special Committee's work moving forward in an orderly and timely manner.

There is a substantial body of research, analysis, and publications relating to voting systems and election procedures that has been produced by notable authorities in the field of election administration which has aided the work of the Special Committee. Several of these works are cited in the Appendix of this Report. Also helpful to the Special Committee were the various reports of previous Maryland Commissions and Task Forces, most notably the December 1997 Report of the Commission to Revise the Election Code, chaired by Marie Garber, former State Administrator of Election Laws, which led to many significant improvements in current Maryland election laws.

The recent presidential election has stimulated extensive public discussion on election reform issues; changes in the voting systems and election procedures around the country can be expected. The United States Congress is considering numerous proposals for federal election reform legislation. Numerous states, including Florida, Georgia, and Pennsylvania, are evaluating their state election laws and voting procedures. The National Association of Secretaries of State, the nation's oldest intergovernmental organization of statewide officials, adopted on February 6, 2001, a resolution to guide federal, state, and local officials in election reform efforts. See Appendix B.

With the backdrop of this national review of elections, the appointment in Maryland of the Special Committee on Voting Systems and Election Procedures was appropriate and timely.

The citizens of Maryland must have the highest degree of confidence in the voting systems and election procedures used in the election of their public officials and in the determination of ballot issues. Marylanders deserve an election process in which voting is easily understood, fully accessible, as convenient as possible, and in which all votes are counted accurately and fairly.

Respectfully submitted,

John T. Willis
Secretary of State
Chair, Special Committee on Voting Systems
and Election Procedures in Maryland

EXECUTIVE SUMMARY

> "No right is more precious in a free country than that of having a voice in the election of those who make the laws under which, as good citizens, we must live. Other rights, even the most basic, are illusory if the right to vote is undermined." Wesberry v. Sanders, 376 U.S. 1, 17-18 (1963).

The conduct of elections in the United States and the State of Maryland is a complex enterprise. Nationally, in the 2000 presidential election, more than 100 million voters cast ballots on over 700,000 voting machines in over 200,000 polling places that were managed by approximately 22,000 election officials and 1.4 million part-time election workers. In Maryland, 2,719,636 of the approximately 4 million citizens of voting age were registered to vote for the November 7th presidential general election. On election day, 1,940,089 Marylanders voted in 1,666 precincts at 1,459 polling places throughout the State, and 96,366 absentee ballots were counted within several days thereafter. Hundreds of state and county election officials, along with over 17,000 election judges stationed at the polling places, were responsible for the administration of the recent election in Maryland.

Despite the size and scope of election activity, and the important consequences of elections for citizens, the infrastructure for the administration of elections lags well behind the support systems for routine personal, commercial, governmental and social interaction in our state and nation. Billions of transactions utilizing modern technology are conducted every day by U.S. citizens with a high degree of confidence and user satisfaction. Citizen-voters should have the same level of confidence and satisfaction in the accuracy and capability of the voting systems and equipment they use when exercising their most fundamental right – **the right to vote**. The technologies used for obtaining money at the ATM, pumping gas at the neighborhood service station, making airplane reservations, or checking out of the supermarket should be available for exercising the most important and fundamental right in our state and country.

As observed by the United States Supreme Court in the *per curiam* portion of its unprecedented decision which resolved the 2000 Presidential Election,

> [t]he closeness of this election, and the multitude of legal challenges which have followed in its wake, have brought into sharp focus a common, if heretofore unnoticed, phenomenon. Nationwide statistics reveal that an estimated 2% of ballots cast do not register a vote for President for whatever reason, including deliberately choosing no candidates or insufficiently marking a ballot. . . . After the current counting, it is likely legislative bodies nationwide will examine ways to improve the mechanisms and machinery for voting. Bush v. Gore, 531 U.S. ___ (December 12, 2000) (p. 4-5).

In American politics, close elections are not unusual and occur regularly at every level of government in our democracy. In Maryland, the 1800 presidential election produced a tie in the State's electoral votes. In the 1904 presidential election, the difference between the leading Republican and Democratic state electors was a mere fifty-one (51) votes. Governor Albert Ritchie began his four-term run as the State's chief executive officer with a margin of only 165 votes in the 1919 gubernatorial election, the closest in State history. Former Congressman Kweisi Mfume commenced his distinguished career with a narrow three (3) vote primary election victory in a 1979 race for City Council. Some members of the General Assembly have been elected with margins of less than a hundred votes and, occasionally, with single digit margins. Important offices at the county and municipal levels of government in Maryland are often closely decided and, in some recent instances, have been decided by a single vote or resulted in a tie vote. The frequent occurrence of close elections demands that the voting systems and equipment used in elections be accurate and reliable and that election procedures be open, clearly understood, and fair.

A frequently asked question after the presidential election held on November 7, 2000, was, "Could the situation in Florida have happened in Maryland?" The answer is both yes and no. **YES** – there could be a close election at some level of government in Maryland which would test the capabilities and capacities of the state's voting systems and election procedures. If the margin was very narrow, and if the contest involved jurisdictions where "overvotes" may occur or where voter intent was misread or not recorded, many of the same issues could have arisen in Maryland. **NO** – because the majority of Maryland's voters utilize more modern voting system technology and because the State Board of Elections promulgated, in advance of

or where voter intent was misread or not recorded, many of the same issues could have arisen in Maryland. **NO B** because the majority of Maryland=s voters utilize more modern voting system technology and because the State Board of Elections promulgated, in advance of the election, specific recount procedures for each type of voting system utilized in Maryland, we would not have had the administrative and judicial confusion which reigned in Florida this past November.

The citizens of Maryland can be confident in the current administration of elections by the State Board of Elections and the Local Boards of Elections and can take pride in our high ranking among the 50 states in capturing voter intent and accurately recording votes. In the 1996 Presidential Election, Maryland ranked third lowest nationwide in the percentage of the voters not being recorded as having voted for President, the highest position on the ballot. The national average of Ano votes@[1] in the 1996 General Election was 2.04 percent; Maryland had only 0.73 percent of Ano votes.@ Although the national average of Ano votes@ is not yet available for the 2000 General Election, Maryland=s percentage of Ano votes@ was lowered in this most recent general election to 0.52 percent, which should again rank Maryland among the very best states in recording the will of the people. See Tables 1 and 2 and Maps 1-7.

With 2,036,455 voters participating in the 2000 presidential election in Maryland, only 10,553 voters were not recorded as casting a vote for President. See Table 3. In stark contrast, 179,855 voters out of 6,137,938 million voters were not counted as having voted for President in Florida **B** a rate of Ano votes@ nearly six times greater than Maryland.[**] The narrow 537 Florida vote margin that ultimately determined the presidency, coupled with the high Ano vote@ rate in that state, ignited a national inquiry and debate over the quality of voting systems and the

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[1] A Ano vote@ includes voters who deliberately did not cast a vote for President, who voted for more than one candidate for President, or who may not have had their vote accurately counted by the voting system used by the voter. The percentage of Ano vote@ for President represents the number of voters not recorded as voting for President in each state divided by the total number of voters who voted in the 1996 General Election. The percent of Ano votes@ was significantly higher among votes cast by absentee ballot than votes cast at the polling place on election day in the 2000 presidential election in Maryland.

[**] Florida's "no votes" and total votes cast for President have been revised to reflect the data reported in the Final Report of the Florida Governor's Select Task Force on Election Procedures, Standards & Technology (February 2001).

advance of the final outcome of the presidential election) establishing a Special Committee to review Maryland's voting systems and election procedures.

As described more fully in the following detailed Report, the Special Committee worked diligently during the past two months to accomplish the goals and objectives of the Executive Order. Public hearings were held on January 4 and 18, 2001, and public work sessions were convened on February 1 and 7, 2001. During each of these open meetings, time was allotted for public comment and for contributions from the members, directors, and staff of the State Board of Elections and Local Boards of Elections. The supplemental volumes to this Report contain over 700 pages of statements, suggestions, letters, responses to inquiries, statistical information, reports and articles which were considered by the Special Committee. Upon the timely submission of this Report, the Governor and the General Assembly will be able to make improvements in the conduct of elections in Maryland during the 2001 Session of the Maryland General Assembly. While, as noted above, Maryland ranks high nationwide in its ability to conduct fair and accurate elections, specific changes or improvements should be made to further ensure more accessible, reliable, secure, and uniform elections.

The major findings and recommendations of the Special Committee are:

1. The State Board of Elections, in consultation with the Local Boards of Election, should, as soon as possible, select and certify a uniform, mandatory voting system for use in all polling places in Maryland and a uniform absentee voting system for use in all jurisdictions.

2. The preferred uniform voting system for all polling places in Maryland should be a direct recording electronic voting system.

3. The preferred absentee ballot voting system should be an optical scan voting system with uniform procedures and standards for counting in all jurisdictions.

4. The State of Maryland should authorize the use of "provisional ballots" to provide citizens with a full opportunity to vote in the event errors have been made in the voter registration process or election day administration through no fault of the voter.

5. With the statewide voter registration system currently under development and scheduled for implementation by December 1, 2001, voters who move from one jurisdiction in Maryland to another jurisdiction should not be required to take additional steps to re-register to vote in their new jurisdiction.

6. Under current federal law, as recently interpreted by the United States Supreme Court, there is a need to certify, at an earlier date, the presidential electors for the State of Maryland.

7. To modernize voting systems and provide for their proper utilization, the State of Maryland should provide funding to assist the Local Boards of Elections in the lease or purchase of voting equipment. Funding for voting systems should be in the form of a grant program and based upon voting age population in each jurisdiction.

8. To ensure the proper administration of elections and adherence to election procedures, the State of Maryland should annually appropriate $100,000 for education and training of election officials, election judges, and other election day workers.

The Special Committee believes its work and this Report will be of substantial benefit to the Executive, Legislative, and Judicial branches of government and to the citizens of Maryland. Improvements can, and should be made, in Maryland's voting systems and election procedures as suggested in this Report. The quality of voting systems does make a difference in the accuracy of counting votes. Also, the proper administration of elections is essential for unequivocal, public acceptance of the outcome of any election. It is imperative that the State of Maryland and local governments continue to devote the financial resources necessary to construct a comprehensive election management system. Such a system will utilize the best available technology to provide electronic linkage through all phases of election administration from the voter registration process to the polling places on election day and from the initial tabulation of results to the official certification of the election. Assisted by adequate resources and advanced technology, a comprehensive election management system will ensure accurate election outcomes and enhance public confidence in the election process.

DESCRIPTION OF SPECIAL COMMITTEE PROCEEDINGS

Governor Parris N. Glendening established the Special Committee on Voting Systems and Elections Procedures in Maryland on December 4, 2000, by issuing Executive Order 01.01.2000.25. See Appendix A. The Special Committee consisted of fifteen (15) members with Secretary of State John T. Willis designated as Chair and former State Senators Julian L. Lapides, Esq. (D) and F. Vernon Boozer, Esq. (R) serving as Vice Chairs. Two current members of the Senate of Maryland, Michael J. Collins and Joan Carter Conway, and two current members of the Maryland House of Delegates, John S. Arnick and Robert H. Kittleman, were appointed by their respective presiding officers to represent the Maryland General Assembly. The public members were Anne Arundel County Executive Janet S. Owens, retired Court of Special Appeals Judge Raymond G. Thieme, H. Harry Basehart, Ph.D., Frances Murphy Draper, Lt. Gen Emmett Paige, Jr. (Ret.), and Linda Bowler Pierson. The Chair of the State Board of Elections, Helen L. Koss, and the President of the Maryland Association of Election Officers, Marvin L. Cheatham, served as ex-officio members.

The mission of the Special Committee was to evaluate the voting systems and election procedures used in Maryland, review existing standards for recounts and contested elections, recommend appropriate funding levels, and recommend statutory and regulatory changes to ensure full and fair elections. In order to fulfill its mission, the Special Committee formed workgroups to focus in four areas: (1) voting systems; (2) election and recount procedures; (3) appropriate judicial and administrative remedies; and (4) appropriate funding formula and mechanisms. The evaluation of current voting systems and election procedures as well as recommendations of the Special Committee are arranged in this Report according to these four subject matter areas.

The Special Committee held its organizational meeting on December 20, 2000, at which time a briefing on current election administration and procedures was given by Linda H. Lamone, State Administrator of Elections. See Appendix C. Public hearings were held on January 4 and 18, 2001, and public work sessions were convened on February 1 and 7, 2001. At

every meeting of the Special Committee, time was allotted for public comment and for contributions from the members, Administrator and staff of the State Board of Elections and the members, directors and staff of the Local Boards of Elections. Minutes of these meetings are included in Supplemental Volume I to this Report.

Special presentations were made by Marie Garber, former State Administrator of Election Laws and Chair of the Commission to Revise the Election Code which led to the recodification of Maryland law in 1998; Roy Saltman, one of the leading authorities on voting systems who retired from the National Institute of Standards and Technology (formerly the National Bureau of Standards); Penelope Bonsall, Director of the Federal Election Commission's Office of Election Administration; and Kimball W. Brace, President of Election Data Services, Inc. See Appendix C for copies of their written comments. Individuals who offered public comment are listed in Appendix D. They included representatives from the Maryland Green Party, the American Civil Liberties Union, The American Council of the Blind, and the League of Women Voters. Other Maryland citizens relayed their individual experiences with the State's current voting systems and election procedures and offered recommendations. Written statements provided by these individuals and others are included in Supplemental Volume II to the Special Committee's Report.

The Special Committee reviewed and considered the various reports, statistical information, studies, and articles contained in Supplemental Volume II to this Report. Particularly noteworthy and valuable to the work of the Special Committee were the written responses of the Local Boards of Elections to requests for information concerning the operation of voting systems, examples of voter problems, and the expenses for conducting elections within their respective jurisdictions. The State Administrator of Elections and staff of the State Board of Elections provided substantial assistance and expertise to the work of the Special Committee.

OVERVIEW - ADMINISTRATION OF ELECTIONS IN MARYLAND

The conduct of elections in Maryland is primarily governed by Article 33 of the Annotated Code of Maryland.[2] Subject to the relevant provisions of the Constitution of Maryland, the statutory framework provides for a bifurcated system of administration with the State Board of Elections possessing supervisory and rule making authority and twenty-four (24) Local Boards of Elections responsible for the implementation of election law and the conduct of elections in each of the precincts and polling places throughout the State.

From 1996 to 1998, a comprehensive review of Maryland's election law was conducted by the Commission to Revise the Election Code. The substantial work of this Commission, chaired by Marie Garber, led to a recodification of Article 33 by the Maryland General Assembly in 1998. Of particular significance for the Special Committee, this recent legislative action clarified the requirements for voting systems standards and strengthened the rule-making authority of the State Board of Elections over the conduct of elections. Under the revised election law, a voting system, prior to certification, must be examined by an independent testing laboratory approved by the National Association of State Election Directors[3] and shown by the testing laboratory to meet the performance and test standards for electronic voting systems established by the Federal Election Commission.[4] Art. 33, § 9-102(c). As a result of the strengthening of the State Board of Elections, a comprehensive regulatory scheme to standardize

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[2] Although federal law does not directly govern the administration of elections, there are important federal constitutional provisions and statutes that impact voting – the 1st, 5th, 14th, 15th, 19th, 24th and 26th Amendments to the U.S. Constitution; the 1965 Voting Rights Act, as amended; the 1984 Voting Accessibility for the Elderly and Handicapped Act; the 1986 Uniformed and Overseas Citizens Absentee Voting Act; the 1990 Americans with Disabilities Act; and the 1993 National Voter Registration Act (the "Motor Voter" Act).

[3] The National Association of State Election Directors ("NASED") is an association of professionals who serve as chief election administrators in their respective states.

[4] The Federal Election Commission, in addition to enforcing federal campaign finance laws, offers guidance to the state and local election officials on election administration through its Office of Election Administration. Most significantly, the voluntary standards for voting systems developed by the Federal Election Commission have been included as part of the state certification process in Maryland and thirty-one (31) other states.

election procedures has been adopted. See COMAR Title 33. The 328 pages of regulations promulgated by the State Board of Elections detail the steps to be followed by election officials in the conduct of elections and provide for uniformity in election procedures throughout the state. Under the 1998 Election Code revision and regulations promulgated by the State Board, considerable management and administration responsibility has been delegated to the elections directors at the local level.

The Special Committee observed that, in addition to the changes made with the recodification of Article 33, there has been marked improvement in the administration of elections and the utilization of technology at the state and local level in Maryland during the past five years. Nineteen of the twenty-four jurisdictions in Maryland have modernized their polling place voting systems since the 1992 presidential general election. See Tables 4 and 5. In 1999, electronic filing of campaign finance records was instituted in Maryland as required by Section 13-402 of Article 33. Full electronic access to campaign finance records became available in January 2001. By the end of 2001, the State Board of Election will complete the implementation of a centralized statewide voter registration system which began in 1998 with $3.1 million in additional technology funding provided by Governor Glendening and the Maryland General Assembly.

Annual funding for the State Board of Elections derives from the State's General Fund as budgeted by the Governor and approved by the Maryland General Assembly. The Local Boards of Elections are currently funded in accordance with the budget processes of their respective local county officials. The local governing bodies are required to appropriate funds sufficient to sustain the level of services that the Local Board of Elections, in accordance with the guidelines established by the State Board of Elections, determines to be necessary. Art. 33, § 2-203.

There are other numerous stages in the conduct of elections which require careful administrative attention. A brief description of the critical points in the election process under current law which were relevant to the Special Committee's evaluation and review are presented herein:

1. Certification of Voting Systems

All voting systems in Maryland must be certified by the State Board of Elections. In order for a voting system to be certified, it must meet certain standards specified in Article 33, including the requirements that the voting system protect the secrecy of the ballot and the security of the voting process, count and record all votes accurately, accommodate prescribed ballot formats, and protect all other rights of voters and candidates. Art. 33, § 9-102(c). Additionally, the voting system must have been examined by an independent testing laboratory approved by the National Association of State Election Directors to meet the performance and test standards for electronic voting systems established by the Office of Election Administration of the Federal Election Commission. Although this became a statutory requirement in 1998, the State Administrative Board of Election Laws[5] adopted a policy in 1987 to certify only voting systems that had been reviewed and approved by an independent testing authority.

In addition to the certification standards, the State Board of Elections must also consider the commercial availability of the system, its replacement parts and components, service for the system, the system's efficiency, likelihood of breakdown, the system's ease of understanding for the voter, convenience of the system, timeliness of the tabulation and reporting of election returns, the potential for an alternative means of verifying tabulation, the accessability by voters with disabilities, and any other factor the State Board of Elections considers relevant. Art. 33, § 9-102(d).

Once the State Board of Elections certifies a voting system, the Board is required to periodically review the certified voting systems and evaluate alternative voting systems. Art. 33, § 9-102(b). The State Board must adopt regulations outlining the procedures necessary to ensure that the voting system standards are maintained. These regulations include the responsibility of the Local Board of Elections for management of the system, the steps required to ensure the voting system's security, and the process to tabulate votes and conduct a postelection review and audit of the system's output. Art. 33, § 9-102(e).

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[5] Prior to the 1998 recodification of the Election Code, the State Board of Elections was referred to as the State Administrative Board of Election Laws.

If a certified voting system fails to meet one or more of the certification standards or if the State Board determines that the system no longer merits certification, the State Board can decertify a voting system. Art. 33, § 9-103.

2. Ballot Design and Certification

Under Maryland law, each ballot must be easily understandable by the voters, present all candidates and questions in a fair and nondiscriminatory manner, allow the voter to easily record a vote on questions and on the voter's choices among candidates, protect the secrecy of each voter's choices, and facilitate the accurate tabulation of the voter's choices. Art. 33, § 9-203. All ballots must be as uniform as possible. Art. 33, § 9-204.

The State Board of Elections certifies the content and arrangement of each ballot. Art. 33, § 9-202. Within five days of receipt of the certification, the Local Boards of Election prepare the ballots according to the State Board's certification and are required to publicly display the ballot. Art. 33, § 9-207.

Within three days after the public display of the ballot, a registered voter may seek judicial review of the ballot's content and arrangement or correction of an error. Art. 33, § 9-209. The court can require the Local Board to correct the error, demonstrate why the error should not be corrected, or take any other appropriate action.

It should be noted that the State Board's election management system, which designs the ballots and allows for election result reporting, obtains information from a central database of state and local candidates. New voting systems used in Maryland will be required to produce ballots directly from this data, eliminating the chance of misspelled names, improper ballot arrangement, leaving a candidate off the ballot, or improper wording on ballot questions.

3. Vote Canvassing

In Maryland, the process of vote tallying and tabulation, vote verification and audit, and producing and certifying official election results is called "canvassing." Art. 33, § 11-101(c).

Election judges at the polling places must be provided with detailed procedures by the Local Boards of Elections for the closing of the polls, including directions on the tabulation, recording, and reporting of votes (if appropriate for the polling place), the preparation, signing, and sealing of documents, the security of all equipment and materials in the polling place, and the return of equipment and materials to the Local Board. Art. 33, § 10-314 and COMAR 33.08.01.01 *et seq*. Specific canvassing regulations for each type of voting systems have been adopted by the State Board of Elections. COMAR 33.10.01 *et seq*.

After the election night canvass, each Local Board of Elections is required to verify the proper functioning of the voting system before certifying the vote totals. Verification includes selecting a fixed number of precincts either manually or on a tabulation system different from the one used for the official tabulation. The process followed is dependent upon the type of voting system used. These steps ensure that the election night tabulation was accurate. Within ten days of an election, each Local Board of Elections, functioning as the Local Board of Canvassers, verifies the vote count and certifies that the election results are accurate and that the vote has been verified. Art. 33, § 11-306.

For presidential primary and general elections and for state general elections, the Board of State Canvassers, comprised of the Secretary of State, Comptroller, State Treasurer, Clerk of the Court of Appeals, and the Attorney General, convenes to certify which candidates have been nominated or elected to each office by the greatest number of votes and which questions have

received a majority of the votes cast to be adopted or approved. Art. 33, § 11-503. The State Board of Elections certifies the results of each gubernatorial and special primary election. Art. 33, § 11-501.

4. Recounts and Contested Elections

A candidate who has been defeated based upon the certified results of any election may petition for a recount of the votes cast for the office sought. Art. 33, § 12-101. The recount petition must specify whether the recount is conducted in all of the precincts in which the office

was on the ballot or designate the specific precincts to be recounted and must be accompanied by a bond sufficient to pay the reasonable costs of the recount as determined by a circuit court judge. Art. 33, § 12-105.

The candidate who filed the recount petition is not liable for the costs of the recount if the outcome of the election is changed, the petitioner gained a number of votes equal to 2% or more of the total votes cast for the office, or the margin of difference between the apparent winner and the losing candidate with the highest number of votes is 0.1% or less of the total votes cast. Art.33, § 12-107. If the petitioner is not liable for the costs, the local jurisdiction pays the costs of the recount.

A contested election involves the filing of a petition seeking judicial relief for any act or omission relating to an election. The grounds for a petition are that the act or omission is inconsistent with Article 33, or other law applicable to elections, and that the act or omission may change or has changed the outcome of the election. Art. 33, § 12-202. Upon a judicial finding that the act or omission has materially affected the rights of interested parties or the purity of the election process and may have changed the outcome of an election, the court has the authority to declare the election void and order a new election or order any other relief that will provide an adequate remedy. Art. 33, § 12-204.

EVALUATION AND REVIEW

1. Voting Systems

The following voting systems are presently certified for use in Maryland by the State Board of Elections: (1) AVC Advantage; (2) Model ES-2000; (3) Optech II; (4) Optech III-P Eagle; (5) Optech IV-C; (6) Model-315 Optical Mark Reader; (7) Datavote; and (8) Mechanical Lever Systems. All of the certified voting systems, except the Optech IV-C and Model 315 Optical Mark Reader, are used in polling places on election day. These two systems are used for tabulating absentee ballots.

For the 2000 presidential election, nineteen counties in Maryland used optical scan voting systems as their polling place voting system, and three counties (Allegany, Dorchester, and Prince George's Counties) used mechanical lever voting machines. Montgomery County used the Datavote system. Baltimore City used a Direct Recording Electronic voting system. The type of voting system used by each of Maryland's twenty-four (24) jurisdictions is depicted in Tables 5 and 6 and Map 8. A summary of voting system usage by precincts and registered voters is presented below.

Table 10

Polling Place Voting Systems in Maryland
2000 Presidential General Election

Type of Voting System	Jurisdictions Using System	Number of Precincts	Percentage of Precincts	Number of Registered Voters	Percent of Registered Voters
Mechanical Lever	3	271	16.27%	408,289	15.04%
Datavote	1	227	16.27%	461,287	15.04%
Global ES 2000	2	20	1.20%	34,578	1.27%
Optech II	1	85	5.10%	140,526	5.18%
Optech III-P Eagle	16	738	44.30%	1,361,387	50.14%
AVC Advantage	1	325	19.51%	309,299	11.39%

Map: Voting Systems in Maryland in Polling Places

The Special Committee studied the advantages and disadvantages of voting systems by reviewing current literature, listening to presentations, reviewing detailed reports from the Local Boards of Elections, and receiving demonstrations on the operation of various systems. Specific references detailing the strengths and weaknesses of voting systems include: Eric A. Fisher's "Voting Technologies in the United States," CRS Report for Congress, December 15, 2000; Roy G. Saltman's article entitled "Computerized Voting," Advances in Computers, Vol. 32, Academic Press 1991; and the series entitled Innovations in Election Administration published by the Office of Election Administration of the Federal Election Commission. The Special Committee's observations and evaluation of each system used in Maryland are presented herein below.

(a) Mechanical Lever Machines

With a lever machine, the voter enters the voting booth and selects candidates listed on a ballot by pulling the lever corresponding to the candidate's name. The vote is recorded on paper strips when the voter pulls the curtain handle and leaves the booth. Although approximately 22% of precincts in the United States use lever machines, the use of mechanical lever machines is expected to decline.

Although this voting system is user-friendly and familiar to voters, the lever machine ceased being manufactured in 1972. Replacement parts and the ability to find qualified technicians to work on mechanical lever machines is very limited. Additionally, it is difficult to find printers to print the specialized machine paper strips and the ballot face in the required time frame for current elections. Because the lever machine does not use paper ballots, there is no separate audit trail recording voter intent and a recount of individual ballots is not possible. Mechanical lever machines are very heavy and bulky (weighing up to 800 pounds) and, therefore, require special handling and storage. A further limitation of the mechanical lever voting system is its inability to accommodate the needs of individuals with disabilities.

A review of precinct level election results, anecdotal incidents, and case law demonstrates the problems experienced with mechanical lever machines. Because of the

mechanical components of the voting system, disparities often exist within the same jurisdiction in the number of votes recorded for a particular office. Considering that ballot design and instructions to voters are the same within the jurisdiction, these significant disparities can only be explained by individual lever machines failing to operate properly on election day.

For example, in the 1994 primary election in Charles County, a voter, serving as a challenger and watcher, reported that one lever machine recorded a tally for one candidate that was unusually higher than the tallies on the other lever machines in the precinct. A different machine reported no votes for a candidate who had received 241 votes from the seven other lever machines in the precinct. See pages B27-B28 of Supplemental Volume I. In the 2000 presidential election, one precinct in Prince George's County failed to record 200 voters as casting votes for President (15.71% of the voters in that precinct) while similar precincts had only single digit differences between the number of voters and the total precinct vote for President. In the two previous presidential elections, the same precinct only recorded nine (9) and twelve (12) voters not casting a vote for President further supporting the conclusion of a likely machine malfunction. See Table 12. In McNulty v. Board of Supervisors of Elections for Anne Arundel County, 245 Md. 1, 224 A.2d 844 (1966), a candidate for State Senate campaigned on the slogan "Vote for the Bottom Line," which corresponded to the placement of his name at the bottom of the list of candidates on the lever machine. Because the row below the last line of candidates on the lever machines was uncovered and unlocked on thirty-nine (39) of the forty-nine (49) lever machines in the election district, the blank row underneath candidate McNulty's name received 136 votes, possibly changing the outcome of the election. The examples noted above demonstrate the weaknesses of mechanical lever machines and the random disparities in vote counting caused by mechanical failure and human error in the use of this voting system.

In Maryland, mechanical lever machines are currently used by three counties – Allegany, Dorchester and Prince George's. Pursuant to Chapter 337 of the Acts of 1999, all mechanical lever systems will be decertified as a matter of law on January 1, 2002. These jurisdictions must select and use a new voting system before the primary election scheduled for September

10, 2002. Concern was expressed by some of the Local Boards of Elections that, because of the limited time before the 2002 election and until the State Board of Elections certifies a statewide voting system, the prohibition against the use of lever machines may make it impractical to comply with the current statutory deadline. In order to comply, these jurisdictions may be required to lease, on an interim basis, an alternative voting system and comply with the voter education mandates of the State Board in the event a statewide voting system is not selected and implemented for the 2002 election.

(b) Datavote

With the Datavote system, the voter records selections by punching holes in specific places on a paper computer card. The card is subsequently fed into a centrally located reader to tabulate the vote. About 4% of precincts nationally currently use the Datavote system.

Like other paper-based voting systems, the Datavote system provides a satisfactory audit trail and enables jurisdictions to tabulate large quantities of ballots quickly. Unlike other voting systems, the Datavote system in Montgomery County accepts an overvoted ballot. Because the ballots are tabulated at a central location, the overvoted ballot is accepted and the voter who incorrectly completed a ballot by voting for more than the number of permitted choices in the same race is not afforded an opportunity to correct the ballot error. Additionally, a voter can place the punchcard improperly in the machine, resulting in incorrect, unintentional, and incomplete punches. Because one punchcard can only display a limited number of names or questions, voters may also neglect to cast votes for all the races and questions on the ballot when multiple cards are necessary in an election. A further limitation of the Datavote system is its inability to accommodate the needs of individuals with disabilities.

Montgomery County is the only jurisdiction in Maryland which uses the Datavote system in the polling place and for absentee ballots. Allegany County uses a Datavote system to count absentee ballots. The absentee ballots used in Allegany and Montgomery Counties have pre-scored holes next to the selections that can result in the same problems of “hanging chads,” “dimples,” and overpunched ballots made infamous in the recent Florida presidential election.

In the 2000 presidential election, the weakness of the Datavote system in capturing voter intent was exposed. In Montgomery County, there were 1,428 undervotes and 2,565 overvotes tabulated in the race for President. The 0.76 percent of "no vote" in Montgomery County exceeded the state average of 0.52 percent. In Allegany County, there were 128 absentee ballots out of a total 1293 absentee ballots cast as not having expressed a vote for President – 9.90% of the total absentee votes, a percentage far in excess of "no votes" experienced with other absentee ballot voting systems used in Maryland.

It is not inconceivable to imagine an election where the total number of ballots not counted for an office in Allegany or Montgomery County would exceed the differential between the winning and losing candidates. In such a scenario, a situation not dissimilar to the 2000 Florida experience could arise insofar as the recount procedures for the Datavote system include decisions involving "hanging chads" and discerning "for whom the voter intended to vote" See pages 10-12 of the "Standardized Election Recount Procedures for Datavote" adopted by the State Board of Elections. After reviewing the characteristics of this voting system, it was clear to the Special Committee that the disadvantages of the Datavote system outweigh any of the system's advantages. This finding should not in any way be interpreted as a criticism of the Local Board of Elections for Allegany County or Montgomery County who do an otherwise excellent job of administering the voting systems owned by their respective jurisdictions.

(c) Optical Scan Systems

Using a paper ballot with a specified pen or pencil, a voter fills in an oval or connects an arrow next to the candidate of his or her choice to use an optical scan voting system. The ballot is then fed by the voter into a tabulator which reads and records the marks on the ballot and then stores the ballot in a secure container. Currently, approximately 25% of precincts nationally use optical scan voting systems.[6]

[6] The term "marksense" is often used for optical scan systems, although marksense technology is only one of several methods for recognizing marks on paper through optical reading techniques. In this Report, the term "optical scan" is used to include marksense systems.

A significant advantage of the optical scan voting system is its ability to operate as a "precinct count" system which permits the rejection of an overvoted ballot or blank ballot at each polling place or precinct. With the optical scan unit in the polling place, the voter places the ballot into the unit and, if the voter has voted for an improper number of candidates in the same race or has submitted a blank ballot, the voter's ballot is rejected. The voter then has the opportunity to complete the ballot or receive another ballot with appropriate assistance and instruction from the election judges. This advantage does not exist in a "central count" system. Although "central count" optical scan systems reject overvoted ballots, the tabulation occurs at a central location, and, because the voter is not present during tabulation, the voter is not afforded the opportunity to correct and recast his or her ballot. This circumstance arises in the counting of absentee ballots by an optical scan voting system. which does produce a significantly higher percentage of "undervotes"and "overvotes" than occurs at the polling place on election day.

A second advantage of the optical scanning system is the audit trail which is built into the system in three ways: the memorypack, the tape printout, and the voter marked paper ballot which can be manually recounted. After the closing of polling places, precinct results are easily transported to the central counting area of the Local Board of Elections' office, and a cumulative unofficial report can be printed easily and posted electronically to websites by the Local Board of Elections.

A major disadvantage of the optical scan voting system is the weight, cost, transportation, and storage of the ballots. Adequate funding for the printing and storage of the ballots is required for jurisdictions using this voting system. In addition to the cost of printing the ballots, jurisdictions must carefully select vendors to print the specialized ballots.[7] Optical scan ballots have special timing marks, and because of the sensitivity of the machines to stray marks, the timing marks must be printed correctly or the tabulator may have difficulties reading otherwise correctly marked ballots. In the 1998 elections, several precincts in Anne Arundel

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[7] Under section 9-215(b) of Article 33, the Local Boards of Elections are required to print the number of ballots equal to ten (10) percent more than the previous comparable turnout times the current number of registered voters. For the 2000 presidential election, this was 1,636,243 of ballots. For the entire state, the number of ballots would have been 2,175,709.

County had ballots with improperly printed timing marks. As a result, the ballots would not be accepted by the tabulating unit in the precinct, and voters and election judges experienced frustration and confusion. Improperly printed timing marks also occurred in Cecil County in the 1996 and 2000 General Elections and Baltimore County in the 1998 Primary Election. Optical scan ballots with candidate or issue choices printed on both sides of the ballot were cited as possible reasons for voter error in Carroll and Cecil Counties. See pages B21-B23 in Supplemental Volume I.

As noted by many local election officials, the optical scan voting system does not allow visually impaired voters or voters with some disabilities to cast a ballot without assistance. Because the system uses a paper ballot, a blind or visually impaired voter requires assistance to ensure completion of the arrow or filling in the oval to have a ballot properly marked. In addition, voters with other disabilities may require assistance in completing the ballot and inserting the ballot into the optical scan equipment which infringes on voter privacy and the secrecy of the ballot.

Another significant disadvantage of some optical scan voting systems is that the voter must use a specific marking pen. If a voter uses a writing instrument other than the marking pen provided by the election judges at the polling place, the ballot could be rejected as an unmarked ballot or accepted without being completely tabulated. Finally, in every election, some voters across the State have expressed concern about the privacy of their ballots and the use of the privacy sleeve with the optical scan voting system. After completing the ballot, the voter inserts the ballot into a privacy sleeve which should cover the entire length of the ballot. The ballots remains in the privacy sleeve until it is inserted into the scanning machine. Because an election judge is typically stationed near the voting machine, some voters feel that the election judge has the opportunity to see how the voter has voted.

Although the optical scan voting system can reduce overvotes with affirmative voter action, the system is programmed to read only certain marks in certain areas which may generate undervotes or blank votes. A ballot which has an “x” over the oval, a circle around the arrow or

the candidate's name, or another mark evidencing intent may not be counted by the optical scan voting system as a vote for the intended candidate because the marking is not read or enters another's candidates oval or arrow. See Appendix E for examples of optical scan ballots with markings which may not be tabulated according to the voter's intent. In such circumstances, a manual recount of the optical scan ballots could yield a different vote count from the system-generated tabulation.

In Maryland, nineteen counties use optical scan voting systems in the polling place, and twenty-one counties count absentee ballots with a optical scan system. The experience in Maryland with optical scan voting systems has been generally positive. Many of the disadvantages and problems can be minimized with careful scrutiny of ballot printing, sufficient public education, adequate training for election judges, and proper ballot marking by the voter. With the use of this system, the number of uncounted ballots has dropped significantly in the State. See Tables 1 and 3.

(d) Direct Recording Electronic Voting Systems

Direct Recording Electronic ("DRE") voting systems represent the latest in sophisticated voting technology. Instead of using a paper ballot to select a candidate, the voter pushes a button on the voting machine or touches the computer screen. The voter casts the votes by pressing a "cast vote" button or touching a "submit" button, causing votes to be stored in the voting system's memory. There are differences in ballot layout and design among the Direct Recording Electronic voting systems. Some have a "full face" posted ballot while others have "multi-faced" ballots which involve a changing image on the computer screen. Approximately 7% of precincts nationally used a Direct Recording Electronic voting system, a number that is anticipated to increase significantly.

Because the voter makes selections directly on the voting system, the voter receives immediate visual feedback on the candidate or response to a ballot question selected. This voter interaction with the voting system is programmed to prevent a voter from voting for more than the maximum allowable number of candidates in the race. The ability of a Direct Recording

Electronic voting system to recognize overvotes and prevent the voter from casting an overvoted ballot is a primary advantage of the system.

Another significant advantage of a Direct Recording Electronic voting system over optical scan voting systems or other paper-based systems is simply the lack of paper ballots. As a result, local jurisdictions can significantly reduce expenditures currently allocated for printing and storing ballots. Further, because the voter selects candidates and responses to ballot questions directly on the voting equipment, an inquiry into the voter's intent is not required when there is a recount or contested election. There are no "hanging" or "dimpled" chads, no questionable marks, no misused writing instruments, and less instructions to remember and follow when using a Direct Recording Electronic voting system.

Finally, a major advantage of a Direct Recording Electronic voting system is its ability to handle specific needs of the voting population and be adaptable to future needs and expressions of the voters.[8] Ballots can be programmed in multiple languages. Direct Recording Electronic voting systems are rated the best voting system by the National Organization on Disability.[9] Unlike other current voting systems, a Direct Recording Electronic voting system can be designed to permit individuals with visual impairments the ability to cast, without assistance, a secret ballot. Current models of a Direct Recording Electronic voting system include headphones for audio instructions and alternative devices (such as a dial) for moving around the ballot screen.

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[8] The Center for Voting and Democracy and the Maryland Green Party suggested that the Special Committee consider "instant runoff" or "rank" voting, a method of voting designed to ensure that the winning candidate receives majority support. With "instant runoff" or "rank" voting, a voter ranks candidates in order of preference. If one candidate fails to receive a majority of the votes, the candidate with the fewest number of first-palace votes is eliminated. Votes cast for this candidate are then counted for the voter's second choice candidate. Although this method of voting was once used in Maryland primary elections, it is not currently authorized in Maryland, and the Special Committee did not address this issue. Direct Recording Electronic and optical scan voting systems can be designed to accommodate "instant runoff" voting.

[9] See http://www.nod.org/vote/2000/comparison.html for an evaluation of current voting systems and their accessibility for individuals with disabilities.

There are some potential difficulties with the implementation of a Direct Recording Electronic voting system. As compared with the optical scan systems, a Direct Recording Electronic voting system may be more costly for local jurisdictions because of the sophisticated technology and the need for more than one unit per precinct. In order to reduce lines in the polling place, an adequate number of units must be available. Perhaps, more importantly, comprehensive and thorough testing before and after the election is critical to verifying the accuracy and security of Direct Recording Electronic voting system software. This testing is in addition to the testing conducted by an independent certified testing authority prior to the certification by the State Board of Elections. Testing at every stage of the election process is necessary to provide assurances to the voter, candidates, election officials, and the public of the system's ability to count votes accurately. The testing includes verifying that the hardware components are properly connected, the correct ballot image is displayed, the voter's selections are accurately stored, and that the tabulation will be correct as well as verifying that the software will correctly record votes. The advancement in technology represented by the Direct Recording Electronic voting systems will require additional qualified, skilled personnel to be hired or available to the State Board of Elections and Local Boards of Elections.

Additional assurances that should be made in the use of a Direct Recording Electronic voting system are outlined in the Voluntary Voting Systems Standards prepared by the Office of Election Administration of the Federal Election Commission. Under these standards, which have been statutorily adopted by the State of Maryland, the vendor of the electronic voting system is
required to submit to an escrow agent the source code and documentation of the voting system.[10] The escrow agent maintains and archives the software under conditions set by the State Board of Elections.

[10] According to the federal Voluntary Voting Systems Standards, a voting system's "source code" consists of text files containing program statements which, when compiled and linked, result in an executable software program, including vote tally statements and data entry software for precinct count systems.

In Maryland, only Baltimore City currently uses a Direct Recording Electronic voting system, the AVC Advantage voting system. Other types of Direct Recording Electronic voting systems are available and are being developed, especially in light of the national concern over the quality of voting systems.

2. Election and Recount Procedures

(a) Election Procedures

Election procedures, and the failure to follow election procedures, can affect the citizen's voting experience and potentially impact election results. Although the 2000 Presidential Election in Florida demonstrated the need for uniform election procedures, equally important is the requirement that election officials and poll workers follow those procedures. Voter confusion and error can be reduced by the development of, and adherence to, easily understandable and uniform procedures and by clear voting instructions given to voters. Election administrators should also carefully and uniformly collect and analyze election data to identify and solve potential problems and to continue improvement of election procedures. The consequences of not following election procedures by election officials and by the voters are presented in the responses submitted to the Special Committee by the Local Boards of Elections and illustrated by the five (5) examples presented below:

(1) Failure to follow proper poll opening and using procedures and to conduct proper machine testing is a source of election day problems. A classic example of the importance of following election procedures occurred in the 1970 primary election in Prince George's County. Some voting machines had not been properly "zeroed" before the first vote was cast, some candidates' names were not programmed into the voting machines for the appropriate sub-district, some levers were locked, official repair records and reports were not in conformity with the law, and security at the warehouse where the machines were stored post-election was not adequate. *See* Fowler v. Board of Supervisors of Elections for Prince George's County, 259 Md. 615 (1970). Although the election results were upheld in Fowler, courts have consistently emphasized that the laws governing elections should be "strictly observed in every detail in order than no possible question may arise as to the fairness of an election or as to the accuracy of its results as officially declared." Smith v. Hackett, 129 Md. 73 (1916). *See also* Dutton v. Tawes, 225 Md. 484 (1961).

(2) The regulations for each of the optical scan voting systems require that the election judge ensure that the secrecy of each voter's ballot is preserved. See COMAR 33.10.13.27. Voters in jurisdictions using optical scan voting systems often complain that the election judge stationed at the scanning unit can view the ballot as it is inserted into the unit. Although regulations require election judges to preserve the secrecy of each voter's ballot, this voter concern should be emphasized during the election judge training.

(3) During the 2000 General Election, there were numerous reports of Maryland citizens being unable to vote after completing a change of address form at the Motor Vehicle Administration.[11] The implementation of a statewide voter registration system which the State

[11] When a voter completed a change of address form at the Motor Vehicle Administration, the voter was asked if he or she would like to the change of address to also apply for voter registration purposes. If the voter responded in the affirmative, the Motor Vehicle Administration would forward the change of address form to the voter's former jurisdiction of residence. If the voter had moved from one jurisdiction to another in Maryland, the former jurisdiction would delete the voter's name from their registry and send a voter registration application to the voter.

Continued from page 29

Board of Elections anticipates completing by December 1, 2001, will greatly assist in solving this voter registration issue. Additionally, the Special Committee's recommendation to allow a voter's registration to follow the voter within the State will reduce the inadvertent removal of the voter from the voter registration rolls and support the current position of the State Board of Elections.

(4) One of the most frequent comments and suggestions concerning election procedures involved voters whose names did not appear on the voter registry on election day. This concern about the administration of polling place voting can be addressed with a provisional or challenge ballot. A provisional ballot would enable a voter whose name does not appear on the precinct registry of registered voters to cast a ballot. The completed provisional ballot is placed by the voter in a ballot box segregated from regular ballots cast. Upon verification of individual's registration status by the appropriate Local Board of Elections, the ballot is counted or discarded in the same manner as absentee ballots. If ballot is discarded, the voter can be notified by the Local Board of Elections of the reason why the ballot was not counted. The use of provisional ballots is a method of handling questions concerning voter identification.[12]

Much of the discussion concerning provisional ballots centered on where the voter should be allowed to cast a provisional ballot – the polling place or a central location in the jurisdiction. Since voter convenience is of paramount importance when considering new election procedures

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Many voters, assuming that they were still registered to vote, discarded the voter registration application sent to their new residence and appeared at their polling place on election day. Because the change of address completed at the Motor Vehicle Administration did not change the voter's address for voter registration purposes, the voter was not registered to vote in either their new or previous jurisdiction.

[12] The Special Committee heard from individuals expressing concern about the ability of election judges to discern the identity of voters at the polling place. Maryland law currently provides that a voter can be challenged at the polls on the ground of identity as provided in § 10-312 of Article 33. This issue is often raised by interested parties, although there is little evidence of any significant problem with improper voting in Maryland. With the implementation of a comprehensive election management system, including a statewide voter registration system and electronic linkage to each polling place, the concern of over voter identification can be resolved without undue burden on the voter and election judges to comply with strict voter identification rules and procedures.

and processes, the voter should be allowed to cast a provisional ballot at the polling place, rather than being made to travel to a distant or inconvenient location. The casting of provisional ballots at the polling place is the location of choice by most states authorizing provisional ballots, including Virginia, West Virginia, and Massachusetts.

(5) Several jurisdictions observed that the instruction "Vote for One Pair" for President and Vice President created problems for some voters. In some instances, voters punch two holes, complete two ovals, or connect two arrows, causing overvotes. In other instances, voters circle the names of Presidential and Vice Presidential candidates, instead of properly marking the ballot, causing undervotes or blank votes. The most dramatic recent example of overvotes in Maryland election history occurred in Harford County during the 1988 Presidential General Election. Utilizing the infamous CES punchcard system for that election (the one used in South Florida in the 2000 Presidential Election), 4,853 voters in Harford County who went to the polls on November 8, 1988, were not counted as voting for President and Vice President of the United States. The 7.64 percent of the total votes in Harford County for that year is by far the highest percentage of "no votes" for any Maryland subdivision in modern presidential history.

Table 11

Table of "No Votes" for Harford County in the 1988 General Election

Race	No. of Undervotes	No. of Overvotes	% of Undervotes	% of Overvotes
President/Vice President	580	4273	0.90%	6.73%
U.S. Senator	2208	76	3.48%	0.12%
Representative - 1st District	2018	34	3.18%	0.05%
Representative - 2nd District	1481	56	2.33%	0.09%

Comparing the number of "no votes" for President and Vice President with the number of "no votes" for other races on the ballot in Harford County suggests that there was a problem with the ballot design or instructions for the President and Vice President race. The only difference between the President and Vice President and the other races on the ballot was the ballot instructions. An individual voting for President and Vice President was told to "Vote for One Pair." For other races and ballot questions, the voter was instructed to "Vote for One." Based upon the number of overvotes, it appears that many voters cast votes for two pairs of candidates for President and Vice President, rather than one pair of candidates. See pages B44-B45 of Supplemental Volume I. Other deficiencies of the CES punchcard voting system (ballot preparation, chads, age of voting system, etc.) also likely contributed to this anomaly.

(b) Recount Procedures

Under current law, a candidate who has been defeated based upon the certified results of any election may petition for a recount of the votes cast for the office sought. In the recount petition, the petitioner must specify the precincts where the recount is to be conducted and submit a bond sufficient to pay the reasonable costs of the recount. After a candidate has filed a petition for a recount, the Local Board of Elections conducts a recount according to the regulations and procedures adopted by the State Board of Elections. The existence in Maryland of detailed statutory and regulatory canvassing procedures to verify and correct election day results is a likely explanation for the few requested recounts in the state, insofar as canvassing functions as a "de facto" recount.

Under current Maryland law, a petitioner or counterpetitioner of a recount is not liable for the costs of the recount under three circumstances: (1) the outcome of the election is changed; (2) the petitioner gains two percent or more of the total votes cast for the office; or (3) the margin of difference is 0.1% of less of the total votes cast between the winning and losing candidate or question. Art. 33, § 12-107. Although the current standard appears to be adequate for statewide races, the 0.1% margin has been questioned for non-statewide races with few total voters. Although discussed, no consensus was reached on lowering the current margin,

primarily because the current law has not been tested.[13] One suggestion was to amend § 12-107(b)(2)(iii) to authorize the waiver of the recount costs in non-statewide races if the margin of difference between the number of votes received by the apparent winner and the losing candidate with the highest number of votes was a set number (10, 50, or 100 votes).

As part of the Special Committee's work, a review of the regulations and procedures governing manual recounts was conducted. Although the full implications of the recent U.S. Supreme Court decision are uncertain, it is prudent that any future recount in Maryland be conducted under procedures that are uniform throughout the jurisdiction covered by the disputed election. The State Board of Elections should review and revise its recount procedures in light of this decision. Some of the factors to be considered are outlined in the statement from Marie Garber, former State Administrator of Election Laws, in Appendix C.

The Special Committee identified one procedure needing immediate clarification. Section II(B)(4)(A) of the Manual Recount Procedures for Optical Scan Ballots currently reads: "Votes will only be allowed where the voter's mark is within the arrow or oval provided next to the candidate's name." Section (C) of the same regulation states that "[i]f the mark is incomplete but it is clear for whom the voter intended to vote, the vote shall be allowed." If a voter circled the name of the candidate rather than completing the arrow or oval, section (A) would appear to prohibit the vote from being counted even though it is clear for whom the voter intended to vote, the standard for counting the vote under section (C). To remedy this apparent contradiction and provide greater clarification to the Local Boards of Election, the word "only" in section II(B)(4)(A) should be stricken.

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[13] In 1999 and 2000, there were no recounts requested under the current law. In 1998, there was one general election legislative race determined by six votes and one primary election statewide race decided by eight votes which would have qualified for the current waiver of recount costs. During the recount for the Maryland House of Delegates District 31 race, procedures promulgated by the State Board of Elections worked well, and there was no change from election day in the outcome of the election. The post-recount results narrowed the margin of victory from eighteen votes (18) to six (6) votes.

(c) Data Collection and Reporting

Throughout the work of the Special Committee, leading election authorities advised that collecting and analyzing uniform election data is critical to identifying potential voting system and election procedure problems. Although analysis of data will not always discover or provide an explanation for voting systems and election procedures problems, thorough and accurate data collection is a critical function of the State Board of Elections and the Local Boards of Elections. In nearly every election, numbers are transposed, misread, or erroneously added which cause mistakes and misreporting which are often not uniformly corrected.

In conducting research for the Special Committee, several occurrences of reporting errors surfaced. In the voter turnout numbers originally submitted to the State Administrative Board of Election Laws ("SABEL") for the 1988 and 1992 Presidential Elections, the Local Board of Elections for Charles County certified election results showing that the total votes cast for President and Vice President exceeded the total voter turnout. Although Charles County submitted revised numbers to SABEL several months after the election, the state's data was never officially corrected. In response to an inquiry from the Special Committee, Prince George's County revised its official election results for the 2000 Presidential Election after conducting a special canvass which found additional votes for President that had not originally been counted.

The Special Committee, in its work, also discovered that there are variances in the contents of the election reports and the terminology used by the Local Boards of Elections. Caroline County, for example, uses the Global ES 2000 Voting System, an optical scan voting system. This voting system is programmed to tabulate undervotes, overvotes, and blank votes which are reported differently than with over optical scan voting systems. Overvotes occur when a voter casts a vote for more than one candidate. If a voter does not cast a vote for a race or the tabulator does not read an improper mark, the Global ES 2000 Voting System reports this vote as a blank vote. An undervote occurs when a voter casts less than the stated number of votes for a particular race. For example, in a race where the voter should vote for three candidates, the voter

only votes for two candidates. The Global ES 2000 Voting System would read the ballot but would count the race in which the voter voted for less than that stated number of votes as an undervote. In the reports generated by other voting systems, an undervote is recognized only when a voter does not cast a vote or does not have a vote counted in a particular race. While the definition of undervote is generally similar, some jurisdictions tabulate undervotes on a per ballot basis while others tabulate on a per contest basis. For example, a voter may intentionally fail to cast a vote for a candidate for Congress and a question on the ballot. Some voting systems would report this ballot as one undervote while others would report the ballot as two undervotes since there was no vote cast for two races on the ballot.

The extensive regulations promulgated by the State Board of Elections provide substantial and specific guidelines for the conduct of elections. Along with the expertise and experience of many local elections officials and election judges, these regulations ensure a high quality of administration of elections in Maryland. In every election, there are, to be sure, problems in polling places. Upon consideration of the information received by the Special Committee, it became apparent that voting and election procedures would be enhanced by: (1) improved communication between the polling place and the central location of the local and state election administration; (2) implementation of, and polling place access to, the statewide voter registration system; (3) greater attention to voters in need for assistance whether because of age
(young voters as well as elderly), disability, language barriers, or first-time voters; and (4) uniform reporting requirements to be used by the Local Boards of Elections.

3. Administrative and Judicial Remedies

(a) Review of Maryland's Election Case Law

Election laws were enacted to ensure the free and full exercise of elections, to prevent illegal votes, and determine with certainty the results of an election. Seyboldt v. Mayor & Common Council of Mount Rainer, 130 Md. 69 (1917). Maryland courts have consistently acted to protect the citizen's right to vote and protect the electoral process even when there are irregularities and errors. In handling election cases, Maryland courts have recognized that there

is a distinction between interpreting election laws before an election and interpreting the same laws after an election. See Wilkinson v. McGill, 192 Md. 387 (1949). While election officials are required to follow the law, and are subject to enforcement action for failure to follow the legal requirements, the analysis is different depending upon when the judicial review commences.

Prior to an election, election officials may be subject to judicial opinions ordering them to comply with the law and perform the acts as specified in the statute. When an election has already been held, however, the courts look to whether the election law specifies that a failure to follow the statute invalidates an election or a ballot. Dutton v. Tawes, 225 Md. 484 (1961). If the statute requires that the ballot or election must be invalidated, the Local Board of Election are required to invalidate the election or ballot.

Alternatively, confronted with a statute which does not specify the result from a failure to follow an election law, the courts will review the failure to act to determine if the failure of the election officials to follow the law has interfered with the free and full expression of the will of the voters. Hammond v. Love, 187 Md. 198 (1946) citing Soper v. Jones, 171 Md. 643, 648 (1937). See also Wilkinson at 392. If there has not been an interference of the will of the voters or, in other words, the result of the election is not affected, courts have generally held that the election results will not be disturbed. See McNulty v. Board of Supervisors of Elections for Anne Arundel County, 245 Md. 1 (1966); Lexington Park Volunteer Fire Department, Inc. v. Robidoux, 218 Md. 195 (1958). Additionally, minor errors or irregularities in an election should not cause the disenfranchisement of voters without evidence of fraud. McNulty at 8-9.

In challenging an election, the challenger must demonstrate that the failure to follow the required election law changed the outcome of the election. Pelagatti v. Board of Supervisors of Elections for Calvert County, 343 Md. 425, 440 (1996). Courts have refused to speculate or resort to probability and statistics to determine for which candidate a voter intended to vote. *See*

Wilkinson at 402; McNulty at 11; Pelagatti at 440-41. Without evidence that the results of the election were affected by the irregularity or error, courts have normally upheld elections. Id.

Although there have been election irregularities in Maryland, the courts have been reluctant to overturn the results of an election or order a new election. In Fowler v. Board of Supervisors of Elections for Prince George's County, 259 Md. 615 (1970), it was alleged that voting machines had not been properly "zeroed" before the first vote was cast, some candidates' names were not programmed into the voting machines for the appropriate sub-district, and some levers were locked. Because there was no showing that any specific individual had been disenfranchised and no evidence that the irregularities affected the fairness of the election, the election results were upheld. Id at 619.

In Smith v. Hackett, 129 Md. 73 (1916), a polling place was not within the precinct lines, persons not sworn and qualified acted as substitute election judges and clerks of the elections, and the polling place allegedly failed to be "suitable" as required by law. The court upheld the election because the fairness of the election was not impacted by the irregularities and errors. See also Pelagatti (absentee ballots cast without the appropriate signed affidavits on the application for absentee ballot were counted); Wilkinson (last minute change in polling place location); McNulty (failure to cover and prevent votes on undesignated levers.)

Although courts have upheld elections with irregularities and errors, courts have noted that the laws governing elections should be "strictly observed in every detail in order than no possible question may arise as to the fairness of an election or as to the accuracy of its results as officially declared." Smith v. Hackett, 129 Md. 73 (1916). See also Dutton v. Tawes, 225 Md. 484 (1961).

(b) Judicial Challenges

Under current law, a registered voter brings an action in the appropriate circuit court to challenge an act or omission of an election official. Art. 33, § 12-202. Appeals of the circuit

court's decision are taken directly to the Court of Appeals. Art. 33, § 12-203. In reviewing the case law concerning elections in Maryland, the majority of judicial challenges filed by registered voters cited the failure of election officials to follow procedures, rather than allegations of fraud in elections or canvassing of ballots. Consequently, the Special Committee is proposing that certain acts or omissions may be more properly first appealed administratively to the State Board of Elections, instead of the circuit courts.

As the State agency overseeing elections in Maryland, the State Board of Elections has significant expertise and knowledge about Maryland's election law. As a result, the State Board of Elections should be the first level of appeal for voters alleging a failure to follow election procedures providing for a speedier review and judicial economy. Allegations of election fraud or fraud in the canvassing of ballots should continue to be initially heard by the Maryland courts.

(c) Presidential Electors

In reviewing the time line for certification of presidential electors, the Special Committee noted that there may not be adequate time to resolve a challenged presidential election in Maryland by the date set by federal law when the Electoral College must meet. Under current law, the State Board of Canvassers is required to meet within thirty-five (35) days of the presidential election to certify the candidate receiving the greatest number of votes. Art. 33, § 11-503. A registered voter may seek judicial relief within seven (7) days after the results are certified. Art. 33, § 12-202.

Under the calendar followed for the 2000 Presidential Election, a voter could have sought judicial review of the certified election results until December 14, 2000. Although Article 33 requires the Circuit Court to move expeditiously, there may not have been sufficient time for the Circuit Court and the Court of Appeals to issue a final decision to resolve an election challenge. Shortening the amount of time between the presidential election and the State Board of Canvassers certification meeting would better enable the Maryland judiciary to resolve a

contested election in a timely manner and avoid the potential problems raised in the Florida case before the U.S. Supreme Court this past December.

(d) Absentee and Provisional Ballots

Section 11-303 grants a voter whose absentee ballot was rejected by the Local Board of Elections the right to appeal the board's decision in the circuit court. While the voter may have this statutory right to appeal the Local Board's decision, the statute does not provide for any notice to the voter whose absentee ballot was rejected. If the intent of the legislature was to provide an individual whose absentee ballot was rejected a method to appeal the rejection of an absentee ballot, the State Board of Elections should be authorized to adopt regulations concerning voter notification to establish uniform procedures throughout for the Local Boards of Elections.

Because courts are reluctant to speculate or guess how certain voters voted, election officials must strictly follow election procedures or effective judicial remedies will be precluded. In handling absentee ballots, it is important to separate challenged ballots from non-challenged ballots. Failure to separate may create uncertainty in any recount or appeal because it prevents the candidates and the judicial system from determining the intent of the voter and the outcome of the election. The facts in Pelagatti illustrate the problems that arise when absentee ballots are not properly separated and the reluctance of the courts to speculate about the voter intent. Should the provisional ballots recommended by the Special Committee be authorized, it will likewise be important to separate challenged and non-challenged provisional ballots. Detailed procedures should be promulgated by the State Board of Elections for provisional ballots.

4. Funding Formula and Mechanisms

The State Board of Elections receives its funding from the State's General Fund as budgeted by the Governor and approved by the Maryland General Assembly. The Fiscal Year 2000-2001 budget of the State Board of Elections is $3,882,369 million. The Local Boards of Elections are funded by their respective jurisdictions as mandated by section 2-203 of Article 33.

The annual budgets of the Local Boards of Elections range in size from $60,000 to $3.0 million. The most significant variable in the size of the Local Board operating budget is directly related to the size of the voting age population and corresponding number of registered voters residing in the respective jurisdiction. These numbers directly impact the funds expended for voter education, ballot preparation, and number of voting system units needed on election day. Budget information for the Local Boards of Elections is presented in Table 7 of this Report and in Supplemental Volume I.

Because the cost of conducting elections has heretofore been the sole responsibility of the local jurisdictions, there is wide disparity in the current equipment needs and costs among the local jurisdictions. Seven (7) counties and Baltimore City own their voting systems, and sixteen (16) counties lease voting systems. Two (2) county leases expired in 2000; eleven (11) county leases expire in 2001; three (3) county leases expire in 2003; and one (1) county lease expires in 2004. See Table 7. Table 8 presents additional information for those jurisdictions which lease their equipment showing significant cost variances exist ranging from $.97 per registered voter to over $4.78 per registered voter among the leasing jurisdictions.

The development of a uniform statewide voting system will require the State of Maryland to assist the local jurisdictions in the lease or purchase of the statewide system. Several approaches were discussed and a consensus was reached that the fairest method to allocate state funds to local jurisdictions would be to utilize a formula based upon the voting age population in each jurisdiction. The Special Committee was advised by leading authorities and election professionals that voting system technologies are advancing or significantly changing every three years. Accordingly, a lease or lease with the option to purchase would be the prudent course of action for the State of Maryland and local jurisdictions to pursue in the near term. It is reasonable to expect that procuring a statewide voting system would allow for economies of scale in the lease or purchase of voting system units which would lower the per voter cost for many jurisdictions.

Throughout the proceedings of the Special Committee, the importance of recruitment and training of election officials and election judges was stressed by election authorities, the State Board of Elections and the Local Boards of Elections, particularly with the utilization of new equipment and technology.[14] Recognizing the importance of substantive and uniform training on voting systems and election procedures, the Special Committee believes that an annual appropriation for training and education of election officials and election day workers would be appropriate. The current budgets of the State Board of Elections and the Local Boards of Elections are inadequate for these important functions and should be enhanced.

[14] In Maryland and across the country, the need for qualified election judges and election day workers is a challenge confronting all election officials. Efforts, such as allowing 17 year olds to serve as election judges across Maryland, were suggested in order to increase the pool of election judges. Federal, state, and local governments, as well as private sector employers, should also be encouraged to allow employees to take administrative leave and otherwise remove barriers to their employees' service on election day as election judges and election day workers.

RECOMMENDATIONS

1. Voting Systems

The recommendations of the Special Committee on Voting Systems and Election Procedures relating to voting systems in Maryland are:

1. The State Board of Elections, in consultation with the Local Boards of Election, should, as soon as possible, move toward the selection and certification of a uniform, mandatory voting system for use in all polling places in all jurisdictions and a uniform absentee voting system in all jurisdictions.

2. The preferred voting system at the polling place should be a Direct Recording Electronic voting system.

3. The preferred absentee ballot voting systems should be an optical scan voting system.

4. A Direct Recording Electronic voting system should meet the following criteria:

    a. Present the voter with a ballot where it is easy to recognize all races, candidates, and issues that are to be voted on. (A "full-ballot face" is preferred, however "multi-page ballot" technology (similar to an ATM) may be acceptable if it is clear to voters that several screens must be viewed to complete the ballot and that they are allowed to skip races and issues on which they do not wish to cast a vote.)

    b. Provide the voter the highest degree of secrecy as practicable when casting his or her ballot.

    c. Properly record a voter's ballot choices by preventing overvoting and unintentional undervoting.

    d. Allow for a precinct count of votes as well as future linkage and simultaneous counting at a central location to facilitate reporting.

    e. Provide the voter an opportunity to review his or her choices and, if necessary, to correct any ballot errors prior to casting the vote.

    f. Be capable of creating a paper record of all votes cast in order that an audit trial is available in the event of a recount.

    g. Provide individuals with disabilities the ability to cast a secret ballot and the ability to verify the votes being cast.

    h. Allow, during the pre-election testing of voting systems, a random number of ballots or votes to be tested to ensure accurate tabulation.

i. Be available for leasing rather than purchasing in order to take advantage of anticipated technological advances. The State should ensure that the Maryland Statewide personal computer contract has the purchase v. lease option as a standard item.

j. Be capable of interfacing with the election management system of the State Board of Elections.

5. The State Board of Elections should adopt regulations to clarify their authority under § 9-102 of Article 33 to conduct testing of voting systems during the certification process and during the use of any certified voting system in Maryland.

2. Election and Recount Procedures

The recommendations of the Special Committee on Voting Systems and Election Procedures relating to voting and recounts procedures are:

Election Procedures

1. Each polling place should have a print magnifying glass available to voters.

2. Assistance should continue to be made available to individuals with disabilities and should be emphasized during the training of election judges.

3. All voting unit judges should respect the privacy of the voter, especially when the voter removes an optical ballot from the privacy sleeve. This privacy issue should be emphasized during the training of election judges.

4. Provisional ballots should be authorized in Maryland. The State Board of Elections should adopt regulations and procedures for the casting of provisional ballots at the polling place.

5. Ballot design should ensure that voters are aware that a single vote counts as a vote for a pair of related candidates (President/Vice President and Governor/Lieutenant Governor). The ballot instruction, "Vote for One Pair," has been criticized, and consideration should be given to changing the language.

6. Each precinct should have a reliable means of communicating with the State or Local Boards of Elections and should be electronically linked with the State or Local Boards of Elections. This is in addition to any regular or pay phones available at the precinct.

7. Each Local Board of Elections should conduct a communications assessment and, if necessary, upgrade the telephone systems in their respective offices to include additional lines and call management technology that informs callers of the status of their call.

8. Voters who move from one jurisdiction within Maryland to another should not be required to re-register to vote in the new jurisdiction.

9. The State Board of Elections should expand its regulations concerning election reports and accounting to include uniform definitions and reporting of overvotes, undervotes, and no votes and to ensure that election information is accurate, can be compared among the local jurisdictions and over time. Any corrections of election data should be made at both the state and local levels of administration.

Recount Procedures

1. The State Board of Elections should adopt regulations authorizing a petitioner for a recount to designate the order in which the precincts named in the recount petition should be counted. Similar regulations should be adopted which would allow the counterpetitioner to designate the order in which the precincts named in the recount counterpetition should be counted.

2. The State Board of Elections should amend section II(B)(4)(A) of the Manual Recount Procedures for Optical Scan Ballots to clarify the manual recount procedures for optical scan ballots.

3. Administrative and Judicial Remedies

The recommendations of the Special Committee on Voting Systems and Election Procedures relating to administrative and judicial remedies are:

1. Certain challenges to an act or omission by the Local Boards of Election should first be heard in an administrative appeal to the State Board of Elections. The final order of the State Board of Elections would then be subject to judicial review under the contested case provisions of the Administrative Procedures Act (State Government Article, Title 10, Subtitle 2). Actions alleging fraud in the conduct of the election or in the canvassing of votes would continue to be filed directly in the appropriate circuit court.

2. The State Board of Elections should be authorized by statute to adopt, and should adopt, regulations specifying the time to challenge an act or omission of the Local Board of Elections and to appeal the final order from the State Board of Elections. The provisions in Article 33 (i.e., § 6-209, § 11-303, § 12-202) which specify the time frame to challenge an act or omission of election officials should be repealed, and statutory language granting the State Board of Elections the authority to hear an administrative appeal and to determine the time frame for that administrative appeal and for judicial review of the State Board's final order should be enacted.

3. The processes for canvassing provisional ballots and absentee ballots should be similar. A voter whose provisional ballot was not counted should have the same right of notice and appeal as does the voter whose absentee ballot was rejected.

4 The State Board of Elections should adopt regulations mandating that challenged absentee and provisional ballots should be kept separate from non-challenged absentee and provisional ballots.

5. When presidential electors are elected, the State Board of Canvassers should be required to certify the election results of presidential electors earlier in order to reasonably meet the federal law requirements of the Electoral College meeting date.

4. Funding Formula and Mechanisms

The recommendations of the Special Committee on Voting Systems and Election Procedures relating to funding elections in Maryland are:

1. The State should create a grant program to assist the Local Boards of Election in the funding of voting equipment and training. The amount available to each jurisdiction should depend upon the jurisdiction's voting age population.

2. The State should allocate to the State Board of Elections $100,000 annually for the education and training of election officials.

3. The State and local jurisdictions should lease, or lease with an option to purchase, the statewide voting system.

4. The State of Maryland should support federal legislation providing funding to modernize voting systems, train election officials, and otherwise improve the election process.

5. Any federal legislation authorizing federal funds for election reform should provide for reimbursement of jurisdictions which have already made expenditures to update voting systems.

6. Any federal funds received by the State and local jurisdictions for modernizing voting systems, training election officials, and other improvements in the election process should be shared between the State and local jurisdictions on a pro rata basis, in accordance with the formula recommended above.

CONCLUSION

"We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain inalienable Rights, that among these are Life, Liberty and the Pursuit of Happiness. – That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed."

Declaration of Independence, July 4, 1776

The Special Committee commends the members of the State Board of Elections and the Local Boards of Elections, their respective Administrator, directors, and staff along with the thousands of election day judges and workers, for successfully performing a difficult task – conducting fair and accurate elections in Maryland. Although voters may not generally comprehend the time and effort expended on preparing for election day and in performing post-election tasks, the Special Committee recognizes these efforts and reassures the citizens of Maryland that the state and local officials responsible for the election process are professionals who understand and value the importance of every citizen's right to vote.

Notwithstanding the current efficacy of the administration of elections in Maryland, improvements can and should be made. Voters throughout Maryland should have equal access to the best available voting systems and equipment. Election procedures, voting instructions, and voter assistance should be uniform in all jurisdictions. Our determination to continue striving for excellence in the election process is not simply motivated by reaction to legal consequences, such as the potential for *Equal Protection Clause* challenges created by the recent U.S. Supreme Court decision, but is also prompted by the basic American value of ensuring that the voice of the people is correctly and unambiguously heard.

The Special Committee has confirmed in the course of its two months of research, study and work that the type of voting system used by a jurisdiction ***does*** make a difference in the accuracy of the vote count and that election procedures ***do*** affect the quality of the election

results. During the past decade, nineteen Maryland jurisdictions replaced mechanical lever and punchcard voting systems with optical scan or Direct Recording Electronic voting systems. See Table 4. The change to more technologically advanced voting systems has been accompanied by a significant reduction in the percentage of overvotes and undervotes for the highest office on the ballot. See Table 1.[15] The 0.518 percent of "no votes" in the 2000 presidential election is the lowest percentage in modern Maryland election history and will maintain Maryland's place at or near the top in comparative state rankings.

In formulating its recommendations, the Special Committee has been guided not only by the efficiency of the voting system but also by the ability of the voting system to accommodate complex ballots, handle multiple languages, be fully accessible to all voters and be adaptable to the future needs and expectations of the voters. The optical scan and the Direct Recording Electronic voting systems are both reliable, accurate and secure. The Special Committee prefers a Direct Recording Electronic voting system for the polling place and an optical scan voting system for absentee ballots.

Transition to a new technology inevitably is resisted for a variety of reasons and, while the Special Committee is sensitive to these concerns (especially the instinctive security of a paper audit trail with a marked ballot), the recommendation that Maryland employ the most advanced voting systems and equipment is consistent with past history and the ultimate goal of an informed and satisfied citizen-voter. In fact, the contemporary debate over the most appropriate voting system, optical scan versus Direct Recording Electronic, has a clear historical analogue. As the country's population grew rapidly, and suffrage was expanded, the voting system debate

[15] In evaluating the information on Table 1 and Table 3, it is more appropriate to make comparisons horizontally (within jurisdictions) than vertically (between jurisdictions) to account for the socio-economic variables that exist among jurisdictions. Precinct level analysis is even more illuminating and instructive than these county level tables.

in the twentieth century was between maintaining very carefully crafted rules for counting paper ballots and authorizing mechanical lever voting systems.[16]

The selection of a Direct Recording Electronic Voting System must be preceded, and accompanied at every step of implementation, by thorough testing by the State Board of Elections and the Local Boards of Elections to ensure an accurate, reliable, and secure voting system. Substantial research and guidance exists on the selection and implementation of a statewide voting system. The State Board of Elections has published, in conjunction with its consultant, a Maryland Voting System Procurement Manual. The Federal Election Commission's Office of Election Administration also publishes an excellent series entitled Innovations in Election Administration which offers comprehensive information on all aspects of election administration. Three helpful volumes relate specifically to the work of the Special Committee; Volume 8 ("Election Document Retention in an Age of High Technology"), Volume 10 ("Ballot Security and Accountability") and Volume 17 ("Acquiring Election Systems and Equipment") can serve as useful resources to jurisdictions making technological advancements in voting systems and equipment.

In a speech to the delegates of the Constitutional Convention in 1787 urging an end to divisiveness and in support of the proposed new governing document, Ben Franklin observed,

> "Much of the strength and efficiency of any government, in procuring and securing happiness to the people, depends on *opinion*, on the general opinion of the goodness of that government, as well as of the wisdom and integrity of its governors."

Franklin's observations ring true today. The citizens' perception and opinion of their government and political leaders is based, in large part, on their level of trust in fair, open, and accurate elections. Improvements in voting systems and election procedures are therefore a crucial component in promoting the essential relationship in our democratic form of government between actively engaged citizens and a fair, responsive government which was cherished by our

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[16] See "Voting Machines Vs. Paper Ballots," The Baltimore Sun, May 3, 1935, (Early Edition) in Supplemental Volume II.

nation's founders. Implementation of the recommendations contained in this Report can assist in boosting the lagging participation rates in our state and national elections.[17]

In recommending greater use of improved technology and enhanced funding for the administration of elections in Maryland, the Special Committee on Voting Systems and Elections Procedures underscores the suggestions of earlier Task Forces and Commissions that have studied Maryland election laws and reported to the Governor and the Maryland General Assembly. The Special Committee strongly urges the executive and legislative branches of government to seize the opportunity presented by the increased public awareness resulting from the confusing and uncertain 2000 presidential election and to take a significant step forward in assuring the integrity of the conduct of elections in Maryland.

[17] As a result of the 2000 presidential election, numerous pieces of legislation concerning voting systems and election procedures have been introduced in the United States Congress and many state legislatures. Information summarizing these national and state efforts is being compiled by organizations such as the National Association of Secretaries of State (http://www.nass.org) and the National Conference of State Legislatures (http://www.ncsl.org). Publications such as Roll Call, a source for Congressional news, and Election Administration Reports, an election officials newsletter, also contain relevant information.

Appendix

Appendix A: Executive Order 01.01.2000.25

National Association of Secretaries of State Election Reform Resolution

Adopted February 6, 2001

WHEREAS, the nation's Secretaries of State are committed to protecting an individual's right to vote by ensuring access, accuracy and integrity in elections;

WHEREAS, the administration of elections is a complex enterprise involving 200,000 polling places, 7,000 jurisdictions, 1.4 million poll workers, more than 700,000 voting machines, 100 million voters and 22,000 elections officials;

WHEREAS, the United States was founded upon the principle of self-government in which the right to vote is the most important and fundamental right of the people;

WHEREAS, the conduct of elections is primarily the responsibility of state and county elections officials;

WHEREAS, America's voting systems and election procedures must ensure that all votes are counted accurately and that voting is easily understood and as convenient and accessible as possible;

WHEREAS, our collective expertise with elections issues and our strong commitment to fair and accurate elections will enhance our democratic process;

WHEREAS, the recent election and subsequent civics lesson that emerged draws critical attention to the issues that NASS has steadfastly sought to address; and

WHEREAS, to ensure that all eligible voters are afforded their constitutional right to vote and unfettered access to the elections process,

The National Association of Secretaries of State recommends that State and Local governments and election officials continue to work to:

1. Ensure non-discriminatory equal access to the elections system for all voters, including elderly, disabled, minority, military, and overseas citizens.

2. Encourage the adoption and enforcement of election day rules and procedures to ensure equal treatment of all voters;

3. Modernize the voting process as necessary, including voting machines, equipment, voting technologies and systems and implement well-defined, consistent standards for what counts as a vote throughout the election process ensuring accurate vote counts and minimal voter error;

4. Encourage states to adopt uniform state standards and procedures for both recounts and contested elections, in order to ensure that each vote is counted and to provide public confidence in the election results;

5. Provide elections officials with increased funding to implement the recommendations of this resolution;

6. Conduct aggressive voter education and broad-based outreach programs;

7. Expand poll worker recruitment and training programs by adopting the innovative practices of other states and localities, with the ultimate goal of providing a satisfactory election day experience for all voters;

8. Maintain accurate voter registration rolls with a system of intergovernmental cooperation and communication;

9. Enhance the integrity and timeliness of absentee ballot procedures;

10. Adopt and adhere to the Voluntary Federal Voting Systems Standards for Voting Systems;

11. Provide for continuous training and certification for election officials; and

12. Collect data and election information on a regular and consistent basis to provide a nexus for public consumption and systemic improvements.

NASS further recommends that the Congress:

1. Fully fund the continuous update of the Federal Voting Systems Standards developed in consensus with state and local election officials;

2. Fund the development of voluntary management practices standards for each voting system;

3. Promote intergovernmental cooperation and communication among state and local elections officials to facilitate the maintenance of accurate voter registration rolls; and

4. Provide funding to the States to implement the state and local recommendations of this resolution.

Now, THEREFORE BE IT RESOLVED that the National Association of Secretaries of State welcomes the opportunity to work with the Administration, Congress, governors, state legislators and county election officials as well as organizations such as National Association of State Election Directors and the Election Center, all members of the election community, and concerned organizations, community groups, and the public to secure funding to ensure our citizens will have accurate, reliable, and efficient systems of elections;

THEREFORE BE IT FURTHER RESOLVED, that we, the National Association of Secretaries of State, reaffirm our determination and commitment to ensure that all eligible voters can register and vote, and that all votes will be counted accurately and fairly in each and every election.

APPENDIX C: INVITED SPEAKERS PROVIDING COMMENT TO THE SPECIAL COMMITTEE

A list of the invited speakers and a brief summary of their remarks is attached as Appendix C. Also part of the Appendix is a copy of the written remarks provided by the invited speakers.

Invited Speakers:

Marie Garber, former State Administrator of Election Laws and Chair of the Committee to Revise the Election Code

Roy Saltman, retired computer scientist from the National Institute of Standards and Technology

Penelope Bonsall, Director of the Office of Election Administration, Federal Election Commission

Kimball W. Brace, President of Election Data Services, Inc.

APPENDIX C: INVITED SPEAKERS PROVIDING COMMENT TO THE SPECIAL COMMITTEE

Meeting Date	
January 4, 2001	Marie Garber, former State Administrator of Election Laws and Chair of the Committee to Revise the Election Code, discussed changes enacted as a result of the Commission to Revise the Election Code. Ms. Garber suggested issues to consider when formulating recommended standards for recounts and when choosing a voting system. Roy Saltman, a retired computer scientist, National Institute of Standards and Technology and author of reports on the assurance of integrity in computerized elections, suggested considerations when developing a voting program for Maryland and stressed the importance of system integrity and security. Linda H. Lamone, State Administrator of Elections, provided a summary of the current election administration and procedures in Maryland.
January 18, 2001	Penelope Bonsall, Director of the Office of Election Administration of the Federal Election Commission, suggested issues to consider if a new system is quickly employed and urged the Special Committee to consider full electronic voting systems. Kimball William Brace, President of Election Data Services Inc., suggested some considerations when enacting a new voting system and election procedures.

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Statement to Special Committee on Voting Systems and Election Procedures in Maryland

Honorable John T. Willis, Chair
Secretary of State

January 4 2001

ELECTION CODE REVISION

Impetus for revision of the election code: Contest for Governor, 1994, won by narrow margin – 0.4%. Losing candidate contested the election and cited deficiencies/irregularities in its conduct.

Task Force to Review the Election Law appointed by Gov Glendening 1995.
Extensive public hearings and discussion, then issued report.
Recommendations (among others)

* First: Substantive and comprehensive revision of election code
* Strengthen the State Board of Elections; empower it to direct, regulate and effectively administer registration of voters and conduct of elections on a statewide basis.
* State Board should be more of a management and technical resource for the local boards. " . . . the central recommendation [of the Task Force] is that the Governor and the General Assembly recognize a compelling State responsibility for the organization, administration, and financing of Maryland's election systems."

More detail and specifics in the report of the Task force.

Commission to Revise the Election Code created by the General Assembly, 96 session. Nine members, four of them legislators, the Secretary of State, a former State and local election director, and two former local elected officials. So eight of the nine members knew the election process well, either as candidates for office or as those involved in conduct of elections.

Broad mandate: In the statute, the Commission was directed to make a comprehensive revision of the election Code, based on a full review of the current Code and the election process in all of its aspects. Archaic provisions were to be removed, and omissions and contradictions were to be resolved. The revised code was to be characterized by " . . . clarity, precision, consistency, conformity, completeness and effectiveness . . ." and to include " . . . substantive structural changes . . . the Commission considers necessary to meet the needs of modern election administration."

The first decision made was to start with a clean slate, and to set some specific goals:

1. The Code should be understandable and lend itself to easy reference.
2. The effectiveness of the Administrative State Board of Election Laws should be enhanced, and its grant of authority and responsibilities clearly defined.
3. High performance standards should be established for all aspects of election administration and they should be uniformly applied throughout the State.
4. The use of technology in election administration should be maximized.

Other early decisions, relevant for this group:
1. The Code should set policy. Matters that are essentially procedures for carrying out those policies should be in regulations adopted by the State Board, or in guidelines or administrative directives.
2. Invite input from many sources, and particularly from local election officials.

The Commission met and worked steadily September 96 – December 97; presented the legislation for the 98 session of the General Assembly. With the support of the leadership and effective representation on the floor by our legislator commission members, it was enacted as presented.

<u>Substantive Changes that are relevant for this Committee's work</u>

* Most important: Both the State Board and the State Administrator have broad grants of authority and responsibility. The State Board is to "direct, support, monitor, and evaluate the activities of each local board" and to appoint the State Administrator who is designated the Chief Election Official of the State.
* Maximize use of technology.
* Throughout the code, regulations are mandated to carry out policies.
* Certification of voting systems is strengthened by additions to provisions of current law which have been in the code since electronic systems were introduced. Adherence to Federal Election Commission (FEC) standards and approval by an independent testing authority (ITA) in a National Association of State Election Directors (NASED) program. Paper ballots and lever voting machines have never been certified; they are grandfathered in for use.
* Guidelines for absentee voting to be adopted by State Board.
* Canvassing of votes: State Board to adopt regulations for the local boards to follow; these shall "ensure the integrity of the electoral process and accuracy of the vote tabulation."
* Contested elections and recounts. A number of new provisions.
  Regulations (longstanding) already govern conduct of recount by local board.
  Clarification of content, place and time of filing of petition and counter petition for recount.
  Provides for recount on a ballot question - previously no such provision.
  Involves State Board in the process, to "monitor and support the work of any local board conducting a recount to ensure compliance" with the law.
  Provides a recount on petition of a losing candidate at no cost if the margin between winner and loser is 0.1% or less. (The petitioner also does not pay if the outcome of the election is changed, or if he gains a number of votes equal to at least 2% of total cast.)

This listing of statutory provisions relating to canvassing and recounts is not complete. Moreover, it does not include relevant provisions that are in regulations, and you will have to

look at the regulations to get a full picture of the process and to ascertain if it indeed does provide the full framework needed.

More detail and specifics in Report of Commission to Revise the Election Code

RECOUNTS
(issues to consider when formulating recommended standards)

I have approached this section as follows: What is needed to assure that Maryland will not look like Florida when it has its next recount, and particularly a high visibility one – for Governor, or U S Senator.

Clearly defined and well documented procedures. Why?

Shouldn't undertake any important task without a clear understanding of how the job is to be done.

Will allow settlement of the dispute as promptly as possible; no time wasted interpreting law and writing a plan of action.

Fairness: all parties need to know how to seek a resolution of the dispute and by what means it will be reached.

Legislatures and State election directors have an obligation to assure that local election officials know the policies and procedures.

Uniform standards, consistently applied, provide a basis for the equitable treatment of all parties, in all jurisdictions, and from one election to another.

Written process is in three levels – law, regulations, procedures/guidelines.

Document activity

Keep a chronological log, beginning to end.

Record methods used to ensure materials and equipment security.

Assemble and retain copies of materials used for reference – rules, procedures, guidelines, legal opinions, directives, correspondence, memoranda, etc.

Keep a record of staffing information – assignments, time records.

Record materials, equipment and supplies used.

Record expenditures, including staff compensation.

Record deliberations/discussions concerning challenges to validity of ballots or votes, and decisions made.

Written evaluation, including problems encountered, solutions, recommendations for modifying process.

Securing election materials and evidence

Ballots, ballot boxes, tabulating devices, keys, write-in votes, polling place records, computer related materials including programs, memory packs, output from system printer, absentee voting materials including applications, records of ballots issued, affidavits, returned envelopes, related
correspondence. All should be secured in accordance with a previously defined plan, from the time a recount is requested or ordered until results are certified and possibility of appeal has passed.

Participation of State authority.
State Board of Elections representative(s) should be on site at the recount to supervise, direct, monitor and support the work of the local board and to ensure uniform compliance with the relevant law and regulations.

The state authority also should supply, ahead of time, to the parties to the dispute, the media, and the general public a written description of how the recount is to be conducted. The same information should be available for distribution by local boards.

Define scope of the recount. Should it be limited to a retabulation of votes only, or should it involve a review of other election materials?
There are factors that contribute to the correctness of the election result, some of which will not be tested by recounting the ballots. Is there evidence that voting machines malfunctioned? Did poll workers record correct totals from each machine or from tally sheets? Does the total number of voters balance with the total number of ballots cast? Can all ballots that were delivered from the printer be accounted for – voted, unvoted, spoiled, disallowed, used in testing?

Provisions for accommodating observers.
Process has to be open – to the candidates involved, the media and, space permitting, to others.
Brief the candidates ahead of time so they can recruit the number of observers they need to cover the recount.
Make clear that authorities in charge will establish and enforce guidelines to ensure an orderly atmosphere necessary to reach an accurate count.
Keep records of observers in attendance; they should wear identifying badges.

Method of recount
By machine? On same system as original count, or different system? Hand count?
For mechanical voting machines, there is no recount possible, only a verification of the numbers taken from the machine's counters, and a retabulation of those machine totals to get the contest total.

For electronic systems with a document ballot, counting on a system different than what was used in the original count constitutes a new dimension of accuracy in that it assures there has not been a hardware malfunction. The "different system" could be either another computer or a hand count. This "different system" requirement is a recommendation of the 1975 Saltman report. It requires either duplicate computer facilities – often not available -- or many man-hours if the contest to be hand counted has a large constituency. (Cite Carroll Co. experience after 1984 election, when the certification of a wrong winner would have put the wrong person in office had it not been for the recount on a different system. Reason: the vote-counting software was incorrectly configured and installed, but the testing for logic and accuracy was inadequate and failed to detect the error.)

Usually another computer system is not available, or cannot be configured to accommodate the vote-tallying system. Anyway, my own belief is that the hand count is what is most preferred and trusted by the candidates involved. It is entirely doable, even if it is countywide. And the county will not be responsible for the cost unless the margin was no more than 0.1% (in which

case the losing candidate can request and obtain a recount at no cost), the result of the election is changed, or the petitioning candidate vote goes up at least 2%.

For Direct Recording Electronic systems (touch screen): explore the method for recount. Use of ballot image on a removable storage device? If it must be done from ballot images how comprehensible is this record, and is the process understood by non-technical people, i. e. candidates and media?

When a tabulator is used in the polling place to accumulate votes on a memory device, an optical scanner, e. g., should the ballots be tabulated in the recount on the same tabulator used for that precinct's ballots in the original count?

Should review of the system logs be part of the recount?

Disallowing ballots/votes

Review all ballots for validity before starting recount of the contest? Absentee ballots, timely receipt; signature on envelope oath; etc.

Computer-counted ballots: Some votes may not be counted by the reader either because they were not marked in the proper way or in the proper place for the machine to read them. Yet the voter's intent can be readily determined by human eyes.

Despite all the criticism of the Florida process, intent of the voter should still be the determinant.

Standards for ballot allowance/disallowance should be established and used statewide. They should be in writing, and made available to counting center staff, parties to the dispute, and observers before the recount begins.

Who should make the determination as to a ballot's validity, or disallowance of the vote in a contest? (MD – disallowance requires unanimous vote of the 3-member bipartisan local election board. Unlike FL, where disallowance was often a party line vote.)

Who should be able to challenge ballots? Election officials only? Involved candidates? Any and all observers?

Ensuring timely resolution of disputed elections

In order to arrive at a timely resolution:

Make prompt response to request.

Have a clearly defined process in place – statute, regulations, procedures

Schedule for prior notice of the recount to the involved parties, and tell them their rights and obligations in that connection.

Identify as soon as possible the resources necessary – personnel, materials space – and assemble them quickly, Consult records of previous recounts, at same or another MD local board, or State Board.

Once started, the recount proceeds without interruption until conclusion is reached.

See FEC/OFE report "Contested Elections and Recounts" for a fuller review of issues in recounts, and options for addressing them including those used in other states.

1970s.

Access to voting booth
Ballot comprehensible to the voter
Cost no more than now paying
Audit trail, so the election can be reconstructed and recounted if necessary.
A proved system; no prototype for us
Simple, inexpensive equipment in the polling place
Preference for absentee voting and vote-counting identical to polling place.
If the vendor went out of business, we would not be stranded

2001- Consider all of the above, plus the following:
Precinct or central count
Alert to voter re blank vote, undervote, overvote
Accommodating people with disabilities, especially vision impaired.
Cost – both initial investment and operational expense
Full service contract or purchase; competitive bidding.

New developments, all raising serious questions that have nothing to do with what voting system is used. But if one of these were put in place in Maryland, the voting system would have to be modified or replaced:

All mail elections
Early voting
Internet voting

DON'T FORGET THE SOFTWARE WHEN CHOOSING A VOTING SYSTEM?
Does it count accurately? Is the set-up system user-friendly? Does it produce the reports you want? Does it tell you, for each contest, how many blank votes, undervotes, overvotes? Can it merge polling place and absentee votes to produce total results, or will you have to have merge software developed? Has it been used in enough real elections so that the bugs have been identified and eliminated? Have you talked with those users about their experience? Do you realize that if any user of any voting system tells you he has had no problem with his system, you are not getting a straight story? What you want to know is how did he cope, how did he solve the problem?

Could we have a Florida type recount experience in Maryland?

Florida 00 came down to the state election that would determine the winner of the contest for President of the United States. That electoral contest is unique, because it is the only American election with a constituency that extends beyond one State's boundaries. The stakes were enormous. This was no tennis match; they were contesting for the most important leadership position in the world, and accordingly both the national and international media showed up en mass to cover it and didn't leave until the winner was declared. So the difference between Florida 00 and any other American election is of a degree so great as to constitute a difference in kind. Certainly it was rare; probably it was unique.

The State of Washington had a statewide recount for U.S. Senate at the same time the Florida result resolution was going on, but you never heard about Washington until it was over, which was several days after the Supreme Court decided the Presidential election in favor of George W. Bush.

Remember, too, that it took an unusual confluence of circumstances to create Florida 00: The national popular vote winner was not the apparent electoral winner; for the electoral college winner, it came down to one state which would decide; the Florida vote margin in the certified count was 0.004%. It is highly improbably that such a situation will recur, in Maryland or any other state.

On the other hand, Maryland has had many less celebrated recounts, and will have more. Already it is better prepared for that eventuality than was Florida, and by the time you people get done with your work that State may be in an even stronger position for handling recounts. Let me cite a few reasons why I say this:

FL election law apparently is deficient for coping with a disputed result. Recount is permitted, but timetable is unrealistic.

FL either had no state standards, or chose not to apply them, to assure that all ballots recounted would be measured by the same yardstick.

Local officials made decisions independently whether to recount and when, as well as whether to stop the recount and when.

Florida's State election authority is a single political appointee whose decisions could have been politically rooted. Maryland has a bi-partisan State Board which makes such decisions.

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CONDUCTING ELECTIONS IN MARYLAND: CONSIDERATIONS FOR THE FUTURE

A Presentation to:
The Special Committee on
Voting Systems and Election Procedures in Maryland

Governor Glendening's establishment of this committee is responsive to the flaws in national vote-casting and counting made clear from the dispute in Florida in the recent Presidential election. The Governor's action demonstrates a sensitivity to the needs of the citizens of this state for an election system in which they can have complete confidence. The debacle in Florida was caused by the widespread implementation in that state of a user-unfriendly system whose inaccuracy was greater than the difference in votes between the two major candidates. We in Maryland are fortunate that the pre-scored punch card voting system that was primarily responsible for the ambiguous results that required a resolution by the U.S. Supreme Court is not used in this state.

The publicity that surrounded the count of the Florida votes has brought to the fore some important issues that need to be reviewed in this and every other state: specifically, (1) the accuracy of the voting system in use, which is extremely important when the difference in vote totals between the major candidates is small, (2) the standardization of procedures to determine "the voter's intent" so that they are the same throughout the state, and (3) the "user-friendly" quality of the voting system to maximize the likelihood that the voter will be able to correctly translate his or her intent into commands that a computer will unambiguously understand and that will result in an exact recorded electronic equivalent of the voter's intent.

You are probably aware that I have written two major reports on the assurance of integrity in computerized elections, the first completed in 1975 and sponsored by the U.S. General Accounting Office, and the second finished in 1988, sponsored by the John and Mary R. Markle Foundation of New York City. Both reports were written while I was employed as a computer scientist at the National Institute of Standards and Technology (formerly National Bureau of Standards) in Gaithersburg in Montgomery County. The second report has now achieved its fifteen minutes of fame recently with the wide dissemination of its statement that the use of pre-scored punch card voting systems should be ended. The statement was written over 12 years ago but was ignored by almost everyone but a small group of election integrity experts until the Florida crisis came upon us.

Both reports, of 1975 and of 1988, made important technical recommendations for the improvement of election operations, and also made extensive policy recommendations for institutional change. I found, in the analysis of the election process, that it is not possible to separate significant technical matters from policy issues. The two subjects are bound together because of the deep involvement

in the process by the general public of all walks of life, both as participants in voting and as citizens whose lives are affected by the subsequent actions of those persons converted from candidates to office holders by the election results.

Therefore, I intend to present to you some technical facts of voting systems as they are now, as well as some technical and policy recommendations to be implemented in the future. My recommendations are conditioned by what legislation I expect to be adopted concerning elections in the forthcoming session of the U.S. Congress. While no predictions dependent on the actions of humans can be expected to be totally correct, some general predictions can be made that are likely to occur, if a detailed specificity is not demanded.

Public Confidence: The Bottom Line

It is essential to stress first that "public confidence" in the voting process is a fundamental requirement that we should keep in mind when considering what improvements to propose and carry out. We should be aiming to assure a voting system with very strong fraud-prevention characteristics, with strong assurance of accuracy, integrity, user-friendliness, and reliability, and which produces results that are unambiguous and demonstrable with supporting documentation. There must be in place clear procedures and instructions that both voters and poll workers can easily carry out. We should be aiming for a system design causing our voting process to be "transparent," so that recourse to the courts, as we have just witnessed in Florida, will be extremely rare. We cannot assure 100% system operability at all times, but we can have in place fallback mechanisms and procedures that anticipate almost all unplanned possibilities.

It is important to recognize that the adoption of the most effective methods of vote-casting and vote-tallying are not the only requirements for public confidence. We need to review our current voter registration and voter identification systems for possible improvement. This review cannot be undertaken without considering the Federal Government, since there is extensive Federal law on voter registration. Additionally, application of new technology for voter identification may require considerable funds for research and development, for which Federal assistance could be available in the future. Furthermore, maintenance of an up-to-date list of registered voters, given the situation of our very mobile population, will require extensive use of data processing techniques and considerable interstate cooperation, hopefully fostered with Federal Government assistance and involvement..

Current Vote-Casting Systems

A voter in Maryland now may use one of the following mechanical or electronic systems in casting votes, depending on the selection by the county of the voter's residence: a mark-sense system, a Datavote punch card system, a lever machine, a push-button direct-recording electronic (DRE) system or a touch-screen DRE system. Let us assume that any lever machines now in use, e.g., in Prince Georges County, will be replaced soon, so that the future use of those machines need not be an issue. It is my opinion that any of the computer-based systems listed above (note that a pre-scored punch card voting system is not listed), with the proposed redesign and operational system changes that I will mention, are acceptable for continued use in Maryland, absent additional requirements imposed by court decisions or by new law or regulation. Each of these systems has both advantages and disadvantages; there is not one "best" system. However, future research on

human factors in vote-casting may show that some of these systems are more user-friendly than others, although I have no good data on this, currently. Some characteristics of the three basic types of systems are given, following the discussion on the need for precinct counting.

Precinct Count versus Central Count

With ballot-tallying systems, i.e., either mark-sense or Datavote, I propose that Maryland use only a precinct-count process in the future, rather than the current mixed use of both precinct count and central count. With the latter system, voted ballots are not counted at the precincts, but are collected and transported to a central location where they are counted. (DREs are typically designed only for precinct count.) Precinct counting allows for a voter to be informed of overvotes and to correct his or her ballot. Precinct counting also minimizes the insecurity of transportation of voted but uncounted ballots, permits local precinct officials and workers to receive the results quickly, and eliminates the uncertainty of having the ballots counted (and possibly altered) somewhere else. Although precinct counting is more expensive than central counting, requiring a machine in each voting location, the advantages in risk reduction, elimination of overvoting, and increase in public confidence are worth the extra cost, in my opinion. It appears to me that the historic inability to apply sufficient resources to elections has disadvantaged both administration and the voters, and has hurt public confidence.

Mark-Sense Systems:
Positives, Negatives and Recommended Changes

Positives
* Overvotes can be prevented in a precinct located system if an overvoted ballot is returned to the voter by the computer, and the voter is offered the opportunity to correct errors of this type.
* The likelihood of voter waiting lines very small as many voters can fill out their ballots simultaneously.
* A maximum of one computer is required per voting location.
* If all ballots are accounted for, a paper audit trail is available.
* The hard-copy ballot is an automatic fallback mechanism if the local computer fails.
* Write-in voting is easy to accomplish.
* It is a good system for absentee balloting.

Negatives
* A voter may disregard instructions and not correctly fill in the voting location, or forget to turn the ballot card over to complete the voting process.
* A voter should request a new ballot if an error is made. (Erasures may confuse the computer.)
* "Voter intent" may have to be determined in a very close election.
* Informing the voter of unintentional undervotes is not possible, in general.
* Ballot stub numbering and special precinct procedures must be used to prevent "ballot stuffing" and "chain voting."
* The cost of ballots may be an issue; ballots cannot be reused.
* Card stock must be carefully selected, and printing must be precise.

Recommended Changes
* A small percentage of precincts should be hand-counted to verify computer-based results.

Datavote Systems:
Positives, Negatives and Recommended Changes

Positives
* If the ballot is properly fixed in the holder, the voter can only punch in a voting location.
* All punches are the same size, and no hanging or dimpled chad results from punching, minimizing the likelihood of a "voter-intent" issue.
* Other "positives" are the same as for mark-sense systems, except that Datavote is not as good for absentee ballots.

Negatives
* A voter may not fix the ballot properly in the holder, making incorrect punches possible.
* The small size of the ballot card requires the use of several ballot cards for each voter, and requires higher speed card readers. The extra cards provide the potential for voters to forget to vote all cards or to forget to turn over the cards to vote the other sides.
* Other "negatives" are the same as for mark-sense systems.

Recommended Changes
* Precinct count rather than central count should be used, and the card readers should be redesigned so that a wider, single ballot card such as is available with mark-sense ballots, could be used. The number of pieces of paper handled would be considerably reduced.
* A small percentage of precincts should be hand-counted to verify computer-based results.

DRE Systems:
Positives, Negatives and Recommended Changes

Positives
* No "voter-intent" issue exists, as each voting action is immediately converted to a standard electronic form.
* Re-programming is easier than re-printing for hard-copy ballots if a court should order a change in ballot very soon before an election.
* No hard-copy ballots are used, except for fallback and absentees; this saves costs.
* Overvotes are automatically prevented by computer logic.

Negatives
* Each voter monopolizes the use of the DRE machine while voting; this may create waiting lines.
* The elimination of waiting lines requires the use of more than one DRE machine per precinct; this is clearly a more expensive implementation than the use of a single computer and reader to receive and count hard-copy ballots.
* There is no automatic fallback. Spare DRE machines must be available, or hard-copy ballots must be made available if machines fail.
* The write-in process may be more difficult than for hard-copy ballots. A keyboard may have to be provided.
* The assurance of machine correctness is very difficult to prove, as there is no paper audit trail.
* DREs cannot be used for absentee ballots; a hard-copy ballot must be used, until such time as remote on-line voting is possible and generally available for all absentees.

Recommended Changes

* DRE machines should be redesigned to allow for pre-voting checkout at the precinct, to make sure that the machines are operating correctly before being allowed to be used by the voters.
* DRE machines should be designed to separately store, in a write-only-once memory, the "electronic ballot image" (EBI) of each voter's choices; the requirement of retaining EBIs is included in the Federal Election Commission voluntary standards.
* EBIs should be stored on removable diskettes, and a small percentage of precincts should be recounted on an independently programmed computer.
* DRE machines should be programmed to inform the voter, after a first press of the final "vote" indicator, that he or she has neglected to vote on some contests, if that is the case, giving the voter the option to go back and vote additionally or to ignore the message and press the final "vote" indicator a second time. Such a message may assist a forgetful voter, and gives a second chance to a voter who has mistakenly pressed the final "vote" indicator sooner than he or she intended.

Public Policy and the Future

The Potential for an Augmented Federal Role

The Florida disaster has resulted in increased concern in Congress for the vote-casting and vote-counting aspects of Federal elections, a significant change from conditions existing over many years, in which only campaign finance and voter-registration presented any interest whatsoever. It is likely that some Federal legislation concerning voting systems will be adopted in the forthcoming session of the U.S. Congress. At minimum, it is likely that some appropriation will be made available to enable states to pass new funds on to counties for upgrading systems.

In addition, there is the possibility, although less certain, that Congress will establish a Federal research and standardization program, assigning this responsibility to an existing agency, such as the National Institute of Standards and Technology, or to a Federally funded research and development center, a non-government independent testing laboratory, or an upgraded Office of Election Administration having new powers and programs. The latter office now exists as a 4-person staff, with minimal resources and little clout, within the Federal Election Commission.

The advantage of a Federal research and standardization program is that a coherent national effort would be established. An analogy is the function of the U.S. Department of Transportation in its relationship to the states. The Federal department does not build roads, the states do that, but it does collect data on traffic accidents and airplane accidents, causes unsafe transportation products to be modified or removed from the market, sets standards for road construction, and distributes funds to the states, provided that the states adopt the established standards.

A national effort in election administration, research, and standardization could include, for example:

* data collection of incidents in elections that indicate problems with particular types of voting machines, or of insufficient training of voters, or of problems with voter registration files, etc.,
* studies of the user-friendliness (human factors considerations) of different vote-casting methods,
* the development of new voting systems, including ATM-like terminals and use of the internet,

* analysis of how implementation of the Americans with Disabilities Act in vote-casting would affect the cost and operability of voting equipment,

* promulgation of mandatory national standards for election hardware, software, and voter-interfaces, including assurance of continued availability of independent testing laboratories.

* development or improvement of new methods of voter identification that could be applied to precinct-located voting or to remote voting, and various comparisons among alternatives,

* implementation of connected state databases of registered voters, with ability to communicate changes in registration.

A Program for Maryland

If a solid Federal program not imposing significant costs on the state were to be put forward in a detailed legislative proposal, the Maryland Congressional delegation should vote for it and the state should support it, in my opinion. Such a program will result in benefits to Maryland as well as to other states. Maryland should name participants to present the state's view if such a program is started, and to assure understanding of any requirements that are imposed and their effect in Maryland. If no coherent national program is begun, each state will be on its own, as is presently the case. Then, Maryland must decide which, of the list of possible Federal activities given above, it wishes to pursue on its own. A more pro-active and involved statewide program than exists at present is recommended.

Data collection: An improved collection of data on election results should be undertaken. The data should concentrate on (1) human factors aspects of voting, (2) failures of equipment, and (3) failures of procedures to assure a smooth, rapid and noncontroversial completion of the count.

Decisions as a result of data collection: The human factors studies should determine, for example, which system types and methods of presentation of choices are best suited to clarity for the voting population. As a result of an analysis of this data, decisions could be made as to whether (a) additional training in system usage should be offered to voters, or (b) only systems with the best characteristics should be purchased in the future, or (c) both options should be exercised. Data collected on failures of systems and procedures should lead to recommendations to correct these problems and a schedule for implementation. If data collection and decision-making on failures of systems and procedures are done centrally by the state, that will provide a greater capability to pressure vendors to correct defects, to assure the availability of spare parts, to assure the availability of repair and maintenance personnel, and in general to assure contract performance.

Alertness to new developments: Vendors of election equipment will be continually bringing out new models. The state and local administrators should be alert to the introduction of more cost-effective and reliable systems. An important trend to watch is the possibility of reductions in cost of DRE systems, as cost is the most restraining factor in deploying a multiplicity of DRE units at a single voting location to eliminate waiting lines.

The possibility of statewide procurement: An institutional problem in the vote-counting equipment industry is disaggregation, that is, sales are made in small quantities to small governmental units. The state may wish to determine whether there should be a statewide purchasing process that would reduce unit costs through aggregation of sales. In addition, the state may wish to determine whether all of Maryland should use only one type of voting equipment. The up-side of such a decision is that all citizens would be voting on the same type of equipment,

procurements and maintenance would be statewide and voter training could be statewide. The down-side is that all units might have to be replaced at one time to retain commonality, and new developments could not be introduced in a single small jurisdiction for testing purposes without violating commonality.

Adherence to standards: The state should ensure that all voting equipment used in Maryland adheres to Federal standards, if any. In some aspects of voting machine use, there may be no Federal standards, for example, in the vote-casting interface between the voter and the machine. Even though Florida adopted the Federal voluntary standards, the lack of standards on this subject contributed to the recent Florida fiasco.

More stringent standards: In some aspects of voting, Maryland may wish to adopt more stringent standards than the Federal Government. Human factors in vote-casting may be one of these areas. A second area may be the assurance of computer program correctness and the ability to review source codes. At this time, only the national independent testing authority for software has access to the source codes, which must remain in escrow in case there is a dispute about correctness. Maryland may wish to require that source codes, particularly for DRE equipment, be made available to the state authority to assure correctness. Maryland may wish, also, to assure that voting equipment that has been updated or modified is re-submitted for testing.

No research and advanced development: It is not recommended that Maryland undertake its own research and advanced development program. The benefits of such a program could not be restricted to Maryland, and our state would be subsidizing national developments. Advanced systems, such as remote internet voting, will not be available soon. Participants in a national workshop, held in October, 2000, and sponsored by the National Science Foundation, agreed that difficulties in security prevent remote internet voting from going forward at this time.

Keeping track of new developments: Advanced developments, such as internet voting, fingerprint-based voter identification or remote identification using cryptographic techniques, should be reviewed and followed, and should be considered for implementation only if shown to be cost-effective and solidly designed. It is not appropriate for Maryland to serve as a test site for new and unproven developments. However, for new developments that clearly have some promise, cost-sharing by a potential vendor could be considered.

INFORMATION SUBMITTED BY PENELOPE BONSALL, DIRECTOR OF THE OFFICE OF ELECTION ADMINISTRATION, FEDERAL ELECTION COMMISSION

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ABSTRACT OF THE PERFORMANCE AND TEST STANDARDS FOR PUNCHCARD, MARKSENSE, AND DIRECT RECORDING ELECTRONIC VOTING SYSTEMS
FEDERAL ELECTION COMMISSION, JANUARY 1990

VOTING SYSTEM STANDARDS: A REPORT ON THE FEASIBILITY OF DEVELOPING VOLUNTARY STANDARDS FOR VOTING EQUIPMENT
NATIONAL CLEARINGHOUSE ON ELECTION ADMINISTRATION[18]*, 1982*

VOTING SYSTEM STANDARDS
FEDERAL ELECTION COMMMISSION, JANUARY 1990

PLAN TO UPDATE THE VOTING SYSTEM STANDARDS
FEDERAL ELECTION COMMISSION, FEBRUARY 1999

FREQUENTLY ASKED QUESTIONS ABOUT VOTING SYSTEMS STANDARDS
OFFICE OF ELECTION ADMINISTRATION, JULY 1998

PRODUCTS PURSUANT TO RESPONSIBILITIES UNDER THE NATIONAL VOTER REGISTRATION ACT OF 1993 (NVRA)

THE NATIONAL MAIL VOTER REGISTRATION FORM

[18] Prior to 1996, the FEC Office of Election Administration was known as the FEC National Clearinghouse on Election Administration

Also see Federal Election Commission web page at http://www.fec.gov/elections.html.

IMPLEMENTING THE NATIONAL VOTER REGISTRATION ACT OF 1993: REQUIREMENTS, ISSUES, APPROACHES AND EXAMPLES.
NATIONAL CLEARINGHOUSE ON ELECTION ADMINISTRATION, 1994

THE IMPACT OF THE NVRA ON THE ADMINISTRATION OF ELECTIONS FOR FEDERAL OFFICE 1993-1994
NATIONAL CLEARINGHOUSE ON ELECTION ADMINISTRATION, 1995

IMPLEMENTING THE NVRA: A REPORT TO STATE AND LOCAL ELECTION OFFICIALS ON PROBLEMS AND SOLUTIONS DISCOVERED 1995-1996
OFFICE OF ELECTION ADMINISTRATION, 1996

THE IMPACT OF THE NVRA ON THE ADMINISTRATION OF ELECTIONS FOR FEDERAL OFFICE 1995-1996
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POLLING PLACE ACCESSIBILITY IN THE 1986 GENERAL ELECTION
FEDERAL ELECTION COMMISSION[19]

POLLING PLACE ACCESSIBILITY IN THE 1988 GENERAL ELECTION
FEDERAL ELECTION COMMISSION

POLLING PLACE ACCESSIBILITY IN THE 1990 GENERAL ELECTION
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POLLING PLACE ACCESSIBILITY IN THE 1992 GENERAL ELECTION
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MARIE GARBER, MAY 1992

[19] Provisions of this Act requiring the Federal Election Commission report to the Congress on the accessibility of polling places throughout the country expired in 1992.

Also see Federal Election Commission web page at http://www.fec.gov/elections.html.

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BRIAN J. HANCOCK, APRIL 1992

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WILLIAM C. KIMBERLING, NOVEMBER 1989

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INTERNET VOTING ISSUES
BRIAN J. HANCOCK, SEPTEMBER 1999

STATES WITH UNIFORM VOTING SYSTEMS

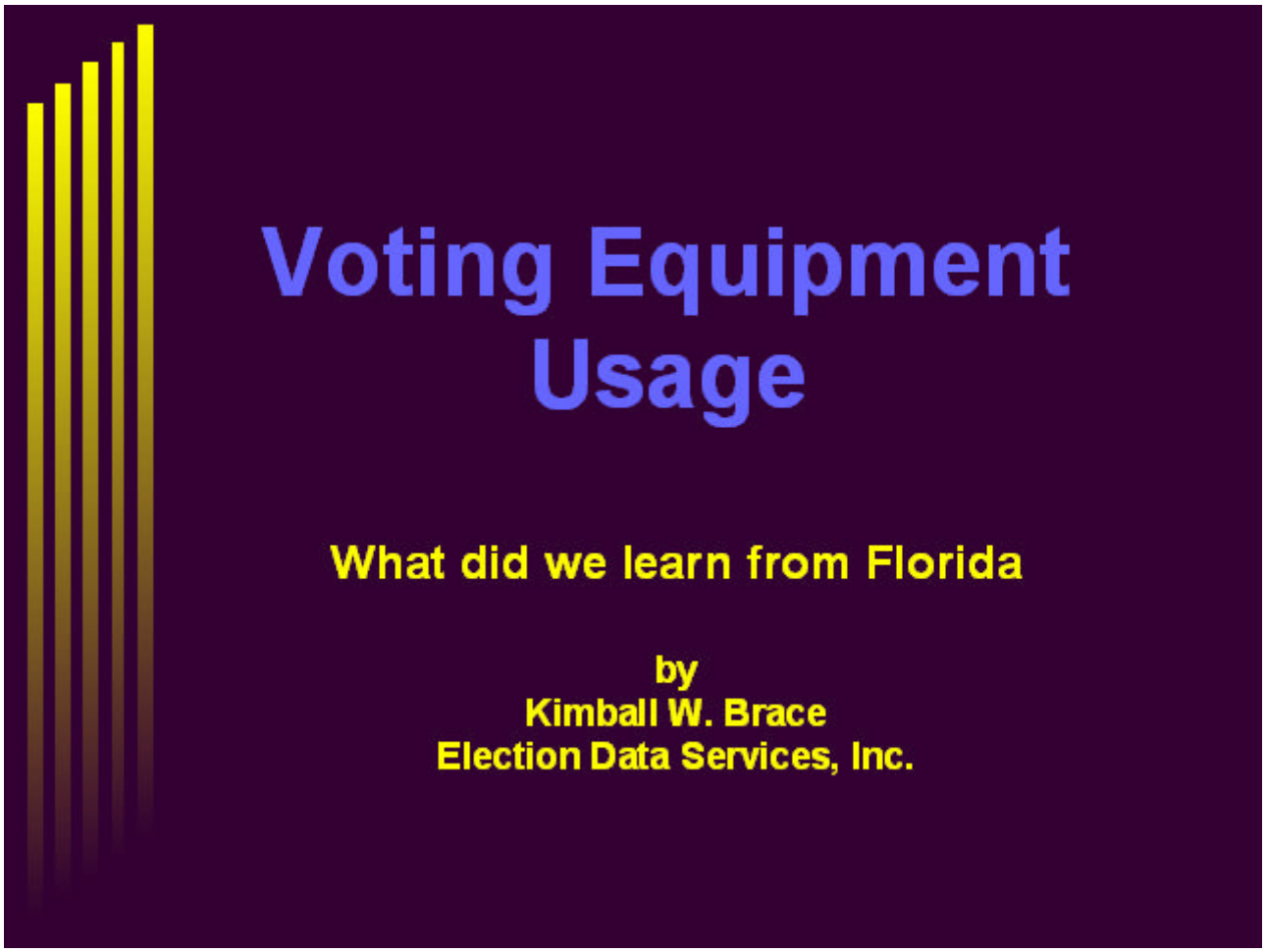
ALASKA

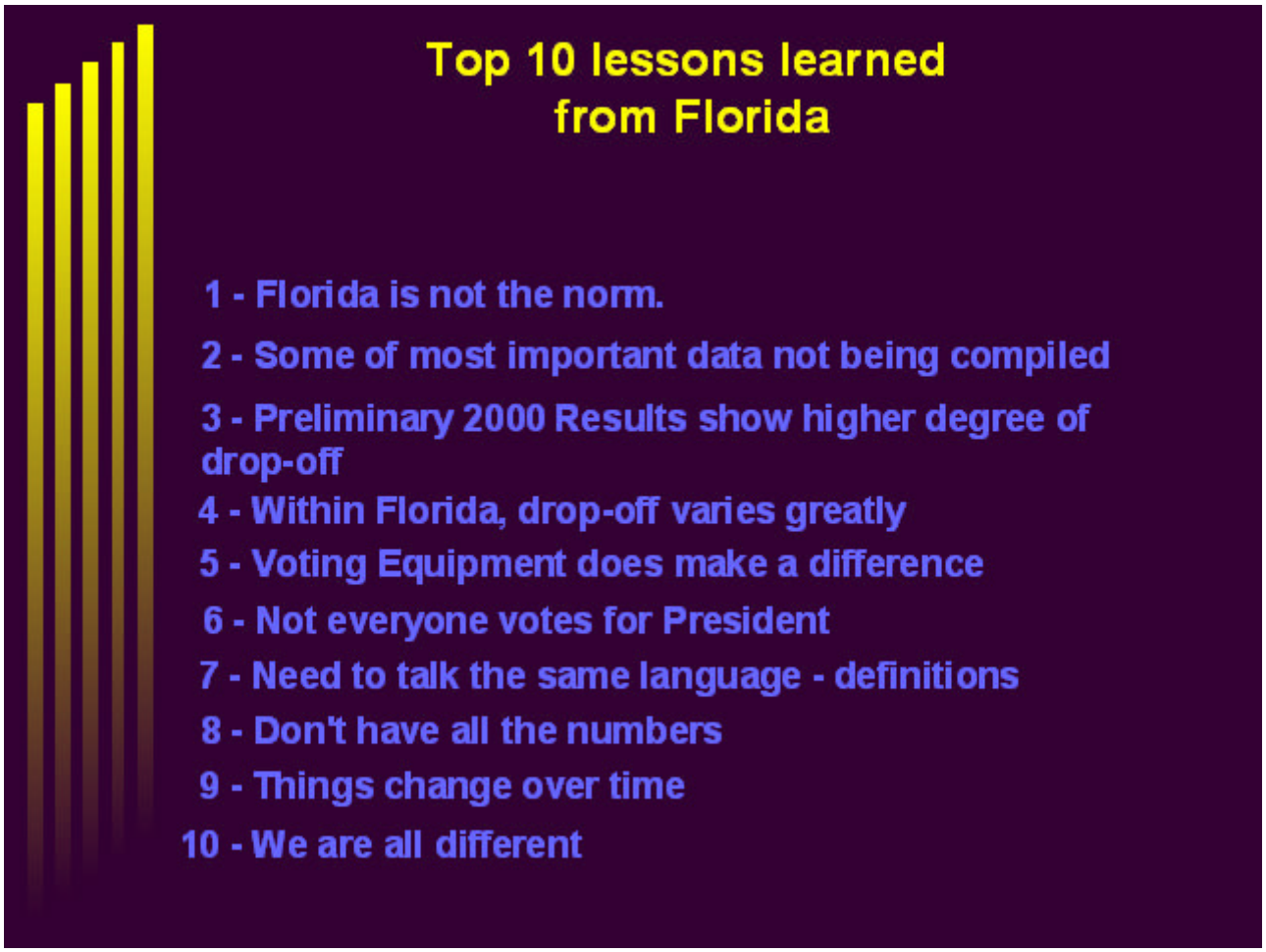
DELAWARE

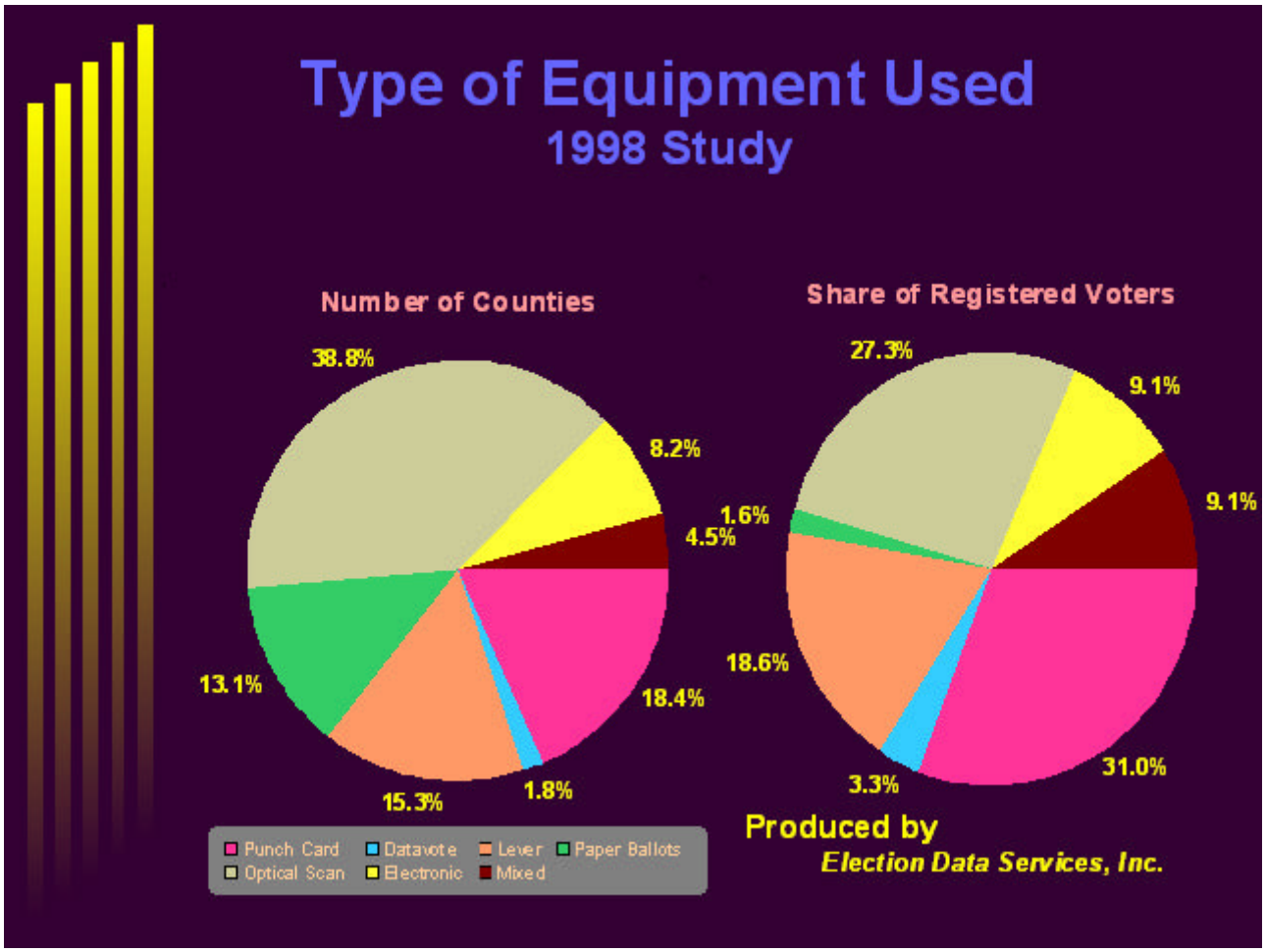
HAWAII

OKLAHOMA

RHODE ISLAND


Voting Equipment Usage
What did we learn from Florida
by
Kimball W. Brace
Election Data Services, Inc.

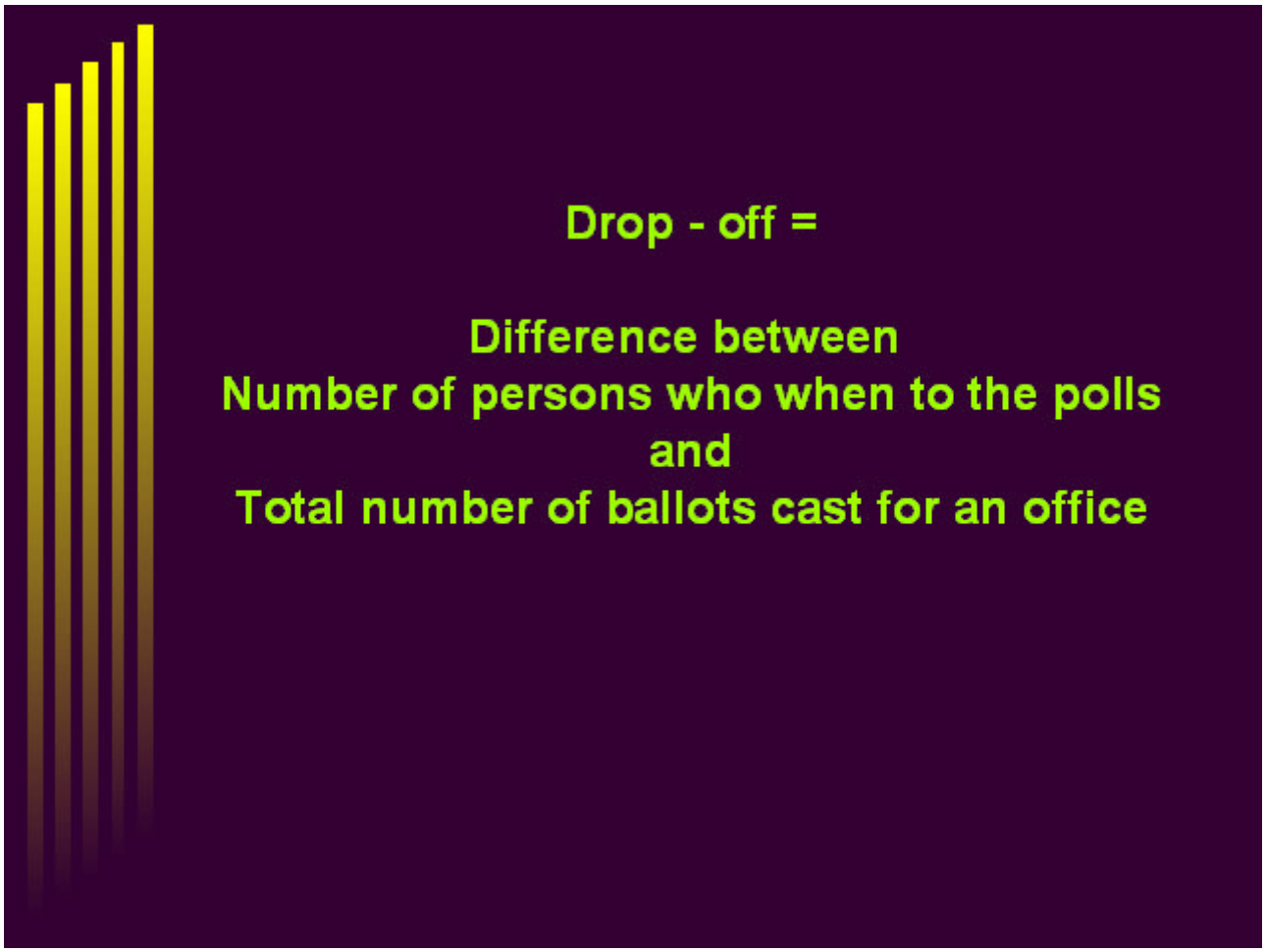

Top 10 lessons learned
from Florida
1 - Florida is not the norm.
2 - Some of most important data not being compiled
3 - Preliminary 2000 Results show higher degree of drop-off
4 - Within Florida, drop-off varies greatly
5 - Voting Equipment does make a difference
6 - Not everyone votes for President
7 - Need to talk the same language - definitions
8 - Don't have all the numbers
9 - Things change over time
10 - We are all different

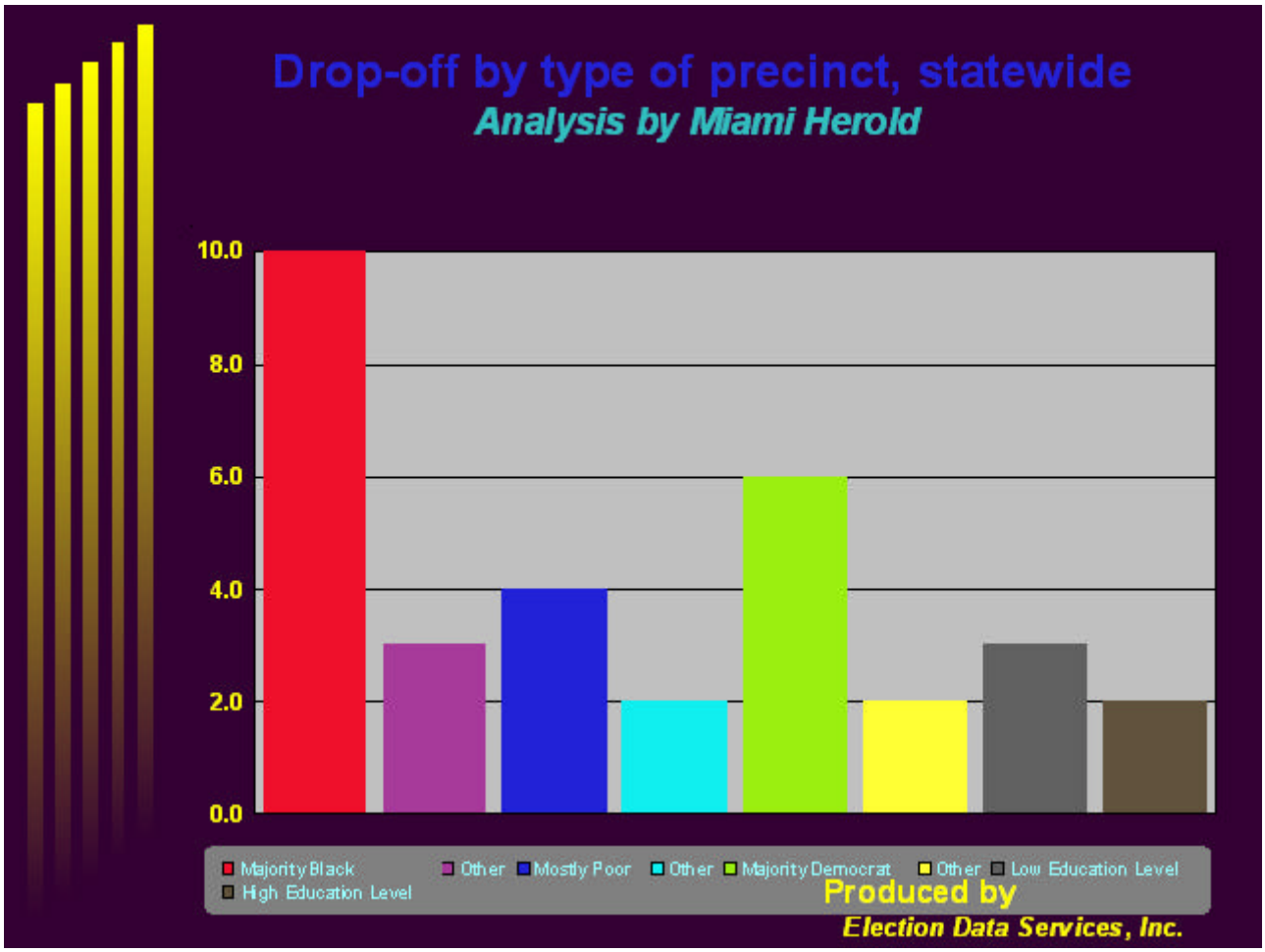

Type of Equipment Used
1998 Study
Number of Counties
38.8%
8.2%
4.5%
13.1%
18.4%
15.3%
1.8%
Share of Registered Voters
27.3%
9.1%
9.1%
1.6%
18.6%
3.3%
31.0%
Punch Card
Datavote
Lever
Paper Ballots
Optical Scan
Electronic
Mixed
Produced by
Election Data Services, Inc.

Drop-off is not "undervotes"

Drop-off is the ***combination*** of:

"undervotes"
and
"overvotes" or spoiled ballots


Drop - off =
Difference between
Number of persons who when to the polls
and
Total number of ballots cast for an office


Drop-off by type of precinct, statewide
Analysis by Miami Herold
10.0
8.0
6.0
4.0
2.0
0.0
Majority Black
Other
Mostly Poor
Other
Majority Democrat
Other
Low Education Level
High Education Level
Produced by
Election Data Services, Inc.

MARYLAND
STATE BOARD OF ELECTIONS
P.O. BOX 6486, ANNAPOLIS, MARYLAND 21401-0486 PHONE: (410) 269-2840

Linda H. Lamone, Esq.
Administrator

Timothy G. Augustine
Deputy Administrator

Ross Goldstein
Terry Holliday
Candidacy and Campaign Finance

TESTIMONY OF LINDA H. LAMONE

SPECIAL COMMITTEE ON VOTING SYSTEMS AND ELECTION PROCEDURES IN MARYLAND
JANUARY 4, 2001
(REVISED VERSION)

Since 1997, the goal of the State Board and the Administrator has been to develop standardized practices and procedures for the conduct of elections in Maryland.

In addition, the State Board and the Administrator have implemented other processes to ensure compliance by the local boards of election with the Election Code and the regulations, guidelines and instructions of the State Board. For example, in 1998 one of the early efforts was to conduct a comprehensive review of the local board offices. An audit report of the findings and recommendations for improving the process was also produced. The State Board staff meets regularly with the local election directors to discuss current issues and to review the implementation of the regulations, guidelines, and instructions issued by the State Board.

Under the direction and guidance of the staff of the State Board, the local boards have surveyed all of the polling facilities in Maryland to determine if the facilities are accessible to disabled voters. The survey was created by a committee established by the State Board. The committee consisted of a member of the State Board, several members of its staff, local election directors, and members of the disabled community.

The State Board staff will conduct another audit of the local boards in 2001 to verify the compliance with the newly revised Election Code and the extensive regulations that have just recently been promulgated to implement the revised law.

The follow standardized procedures that have been developed and implemented by the State Board since 1997:

Absentee voting and registration procedures for nursing homes and assisted living centers
Absentee voting and canvass procedures
Absentee affirmation
A single Statewide voter registration application
Procedures for voter identification at the polls
Procedures for voter identification challenges
Election Judges Training and Procedure Manual for each voting system
Security procedures for election results cartridges and materials

Post-Election audit and verification procedures
Recount procedures for each voting system used
Guidelines and instructions for various petition efforts
Prescribed forms manual
Polling place accessibility survey
Election day emergency procedures
Pre-ballot printing review process
Uniform NVRA list maintenance process
Employees Manual

The following information technology improvements have been made since 1997:

Comprehensive IT plan for the agency, including the IT services provided to the local boards
Central database of all registered voters housed at the State Board (MARS)
Implementation of Local Election Management (LEMS) voter registration system at the county level
Electronic transfer of criminal convictions from the Judicial Information System office to MARS
Electronic transfer of death notices from the Department of Health and Mental Hygiene to MARS
Central duplicate voter registration identification in MARS
Development of electronic transfer of information from the Motor Vehicle Administration to MARS
Update and replacement of election management software (candidate and campaign account entry program, candidate and ballot preparation program, campaign account and campaign report program, elections results reporting, commissions of election preparation program, etc.)
Development of an Electronic Filing and Campaign Finance Information System
Integration of all databases
Upgrade all computer hardware and software at the state and local level
Year 2000 compliance issues addressed

In addition, a comprehensive web site has been developed to include:

A searchable database of campaign finance information (in progress)
Electronic receipt and posting of election results
Downloadable voter registration application
Downloadable absentee ballot application
Information on all aspects of elections in Maryland, including prior election results, candidate lists, voter turnout
Cross platform and open standards file format
Built in accessibility for the visually impaired users (audio browser friendly)
Monthly voter registration activity reports
Compliance with W3 standards

The following miscellaneous projects and other accomplishments have been made since 1997:

Compliance audit of the 24 local election offices
Monthly meetings with local election directors
Informational Bulletins issued to the local election directors
Ethics and standards of conduct for local board members and employees
Summary of Maryland Public Ethics Law provided to local election boards and employees
Regulations have been rewritten to comply with new Article 33 and to incorporate various standardized procedures (e.g., uniform NVRA list maintenance procedures)
Copies of all State Board regulations are provided to local board members, election directors and local board counsel
Voting System Procurement manual
Minimum qualifications and position descriptions for all positions in the local board offices updated and standardized
New salary plan for all positions in the local board offices
Maryland Association of Election Officials (MAEO) committees created (legislative, personnel, regulations, LEMS users, Internet)
Best practices from other jurisdictions reported to the local boards
Liaison with local governments to facilitate the appropriation of the funds, facilities, equipment and personnel necessary for the operation of the local boards

The Division of Candidacy and Campaign Finance provided the following to the local boards of elections:

A new and improved election calendar specifying statutory deadlines and other election timeframes
Revision of the Article 33 provisions relating to candidacy and campaign finance
All candidate-related filing information, including certificates of candidacy, procedural instructions for receiving and processing candidate filings, and instructions for transmission of data to SBE
A listing of all qualifications for filing for office
Procedures for post-election certification of candidates
All campaign committee-related information, including forms, summary guide to Maryland Candidacy and Campaign Finance Laws, standardized memos and notices, procedural instructions for receiving and processing campaign accounts
Standardized forms for reporting campaign contributions and expenditures
A reporting schedule
Standardized pre-report notices
Standardized affidavits
Standardized late fee notices, bills and instructions
Procedures and information on how to review campaign fund reports and determine whether deficiencies exist
Training seminars for the employees of the local boards on all aspects of candidacy and campaign finance

APPENDIX D: LIST OF INDIVIDUALS PROVIDING PUBLIC COMMENT

Copies of written comments from these individuals are located in the Supplemental Volume II of this Report.

Meeting Date	
January 4, 2001	Henry Marshall, a concerned citizen, suggested the tracking and monitoring of voter registration of convicted felons and non-citizens, voter address accuracy, and voter identification at the polls.
	Bob Auerbach, Chair of the Maryland Green Party, recommended lowering ballot access standards for independent and third party candidates.
	Isaac Opalinsky of the Maryland Green Party focused on the training of election judges, counting procedures and privacy of the citizen voter.
	Sonya Taylor, a concerned citizen, commented on the inadequacies of voting machinery and the polling place.
	Penny Reader of the American Council of the Blind advocated the use of voting system that allow individuals with disabilities to cast a secret ballot.
	Charles Chester, election law attorney, focused on recount procedures, ballots, voting systems and canvassing statutes.
	Joan Photiadis of the League of Women Voters, Erie County, New York discussed the importance of voter participation.
	Eric Olson, Deputy Director of the Center for Voting and Democracy, commented on new technology in voting systems and discussed the ability of voting systems to use "instant runoff voting."
January 18, 2001	Robin Downs, Acting Elections Director for Prince George's County, testified that Prince George's County has researched some voting systems and gave the Special Committee some recommendations. In light of the procurement and regulations, Prince George's County's current voting system may need to be used in the 2002 elections.
	Wyett H. Colclasure II, a concerned citizen, discussed voting system validation and the quality of the validation tests.

Eileen Finnagan, a concerned citizen and election judge for the 2000 General Election, reported some of the problems the election judges faced in the polling place.

John Woolums of the Maryland Association of Counties expressed MACO's concern for the cost of the new systems for the counties of Maryland.

Suzanne Smith, Legislative Director of the American Civil Liberties Union, discussed voter registration, problems with participation at the polling place and accessability for individuals with disabilities.

APPENDIX E: SAMPLES OF IMPROPER MARKINGS ON OPTICAL SCAN BALLOTS

Prepared by Sandra Logan
Election Director of the Caroline County Board of Elections

Appendix F: Voting in Maryland*

In the first presidential election held from January 11 to 14, 1789, the eligible voters of Maryland were those free male adults, with a one-year residency in the state and respective counties, who either owned fifty acres of land in fee simple or had personal property of a value in excess of 30 pounds current money.[19] Upon arriving at the single polling place in each county the duly qualified voter had his name inscribed in a poll book besides which the name of the candidate or candidates for whom he voted would be marked after he publicly announced his choices.[20]

The issues of voting qualifications and ballot mechanics have been significant in Maryland's political history from the property restricted, *viva voce* voting of early presidential elections described above to the contemporary lawsuits of third party or independent candidates seeking to have their names placed on the official machine and absentee ballots.[21] An attack on the property qualifications for voting gave the Democratic-Republicans of Jefferson an important political wedge against the Federalists who sought to prevent the extension of suffrage. With their eventual ascension to power in the state legislature, the property qualifications and *viva voce* method of voting were finally abolished in 1802 for state elections and in 1810 for all elections.[22]

However, this "universal suffrage" action did not eliminate voter discrimination in Maryland. In fact, simultaneous with the abolition of property as a requirement for voting the Maryland General Assembly fashioned amendments to the Constitution of Maryland which added the word "white" between the words "free" and "male." The ever-increasing black population in Maryland was therefore denied suffrage from the passage of these State amendments until the Fifteenth Amendment to the U.S. Constitution was ratified becoming effective for the statewide races in 1870.[23] The potential impact of the black vote was perceived as a serious threat to certain political interests and several attempts were made in the course of Maryland's history to deny suffrage to or otherwise frustrate the black voter.[24] During the Civil War, large numbers of Marylanders were disqualified from voting because of their refusal to take a "loyal oath" or because of their southern sympathies.[25] Woman's suffrage was denied statewide in Maryland until required by the Nineteenth Amendment to the U.S. Constitution for the 1920 elections.[26] The voting age was lowered to 18 in Maryland before the 1972 Presidential Election upon passage of the twenty-sixth amendment to the U.S Constitution.

Elimination of voice voting likewise did not prevent ballot coercion in Maryland politics. It was not until 1890 that the printing of ballots was performed under the supervision of state officials. Prior to 1890 the individual voter, candidates or political parties provided a ballot which led to a various election day tactics such as colored ballots, striped ballots, and shingle ballots.[27] Legislation for a true secret ballot, or Australian ballot, was not enacted until 1890 after several years of prompting by various reform groups.[28] Various attempts to disenfranchise certain classes of voters through ballot confusion and registration and residency requirements persisted in Maryland through much of the 20th century.

* This is an extract from J.T. Willis, **Presidential Elections in Maryland** (pp. 3-4, 8-9 of the original edition as revised for the 2001 edition).

Although authorized by the state legislature in 1914, the first election in Maryland utilizing a voting machine rather than paper ballots was not conducted until 1935.[29] The 1956 presidential election was the first statewide election in which all Maryland counties used voting machine systems as mandated by the Maryland General Assembly in 1955.[30] Montgomery County became the first jurisdiction to utilize computer-based technology ("Datavote") to record and count absentee ballots in 1972 and count votes in one legislative district in 1978. Harford County began using a "punchcard" voting system in 1980 and was joined by Carroll County and Frederick County in 1984. Howard County was the first county to utilize "optical scanning" or "mark-sense" voting equipment for elections commencing in 1988. Baltimore City became the first and only jurisdiction to employ a touchscreen direct recording electronic system in 1998.

As indicated in the attached tables, nineteen (19) of Maryland's counties now use an optical scan voting system; three (3) use lever machines which must be discontinued by the 2002 gubernatorial election; Montgomery County still uses a Datavote punch card ballot system; and Baltimore City has a touchscreen direct recording electronic system. All voting systems in Maryland must be certified by the State Board of Elections and must have been tested by an independent testing laboratory and met performance and test standards established by the Federal Election Commission.

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[19] The property qualifications for voting were established in Article II of the 1776 Constitution of Maryland. For a history of the effect on voting and suffrage reform see Thornton Anderson, "18th Century Suffrage: The Case of Maryland," *M.H.M.*, Summer 1981, Vol. 76, pp. 141-158; J.R. Pole, "Constitutional Reform and Election Statistics in Maryland, 1790-1812," *M.H.M.*, December 1860, Vol. 55, pp. 277-285.

[20] Viva Voce voting was specified in the Maryland Constitution of 1776 for various elections (Article II, House of Delegates; Article XIV, State Senate Electors). The poll books, which state the names of voters and whom they voted for, have been preserved for only a few counties. The poll books for Frederick and Kent Counties were examined and analyzed by David A. Bohmer, "The Causes of Electoral Alignments: Some Considerations on How Partisan Behavior is Shaped," Aubrey C. Land, Lois Green Carr and Edward Papenfuse, eds. in *Law, Society and Politics in Early Maryland*, (Baltimore: The Johns Hopkins University Press, 1977), pp. 251-276.

[21] See e.g., *Anderson v. Morris*, 636 F. 2d 55 (1980) (presidential election); *Mathers v. Morris*, 515 F. Supp. 931 (1981) affirmed 649 F. 2d 280 (special election for Congress).

[22] *Laws of Maryland*, 1801, Chapter 90 as confirmed by *Laws of Maryland*, 1802, Chapter 20. The initial constitutional change failed to include Federal elections which were covered in *Laws of Maryland*, 1809, Chapter 83, as confirmed by *Laws of Maryland*, 1810, Chapter 33. The reason for multiple citations to acts of the Legislature is because voting qualifications were a part of the state constitution. Under Articale LIX of the 1776 Constitution, amendments had to pass both houses of the Maryland General Assembly, be published at least three months prior to an election of new House of Delegates and passed again by the legislature. This procedure has caused erroneous and incomplete citation of various laws pertaining to Maryland's political history from 1776 through 1851.

[23] The Fifteenth Amendment was passed by Congress on February 26, 1869, and ratified on March 30, 1870. The state legislature of the time refused to ratify the Amendment, and it was ceremonially ratified in 1973 by Maryland, 103 years after it became effective.

[24] The attempted disfranchisement of black voters is well presented in Margaret Law Callcott, *The Negro in Maryland Politics*, 1870-1912 (Baltimore: The Johns Hopkins Press. 1969), pp. 101-138.

[25] From one-third to two-thirds of Maryland voters are estimated to have been potentially disfranchised by the loyalty requirements specified by Section 4 of Article 1 of the 1864 Constitution of Maryland. For an insight on the impact of Maryland voting, see *Wm. A. Ross*, "Disfranchisement in Maryland (1861-67)," *M.H.M.*, December 1933, Vol. 28, pp. 309-328.

[26] The Congressional resolution was passed on June 5, 1919, with ratification effective August 26, 1920. Maryland joined Delaware and eight southern states in rejecting or failing to pass this amendment. The Maryland General Assembly rejected the Nineteenth Amendment on February 24, 1920. A suit to require the Maryland Board of

Registry to strike the names of women from the voter rolls because of conflict with the state constitution was rejected by the U.S. Supreme Court in *Lester v. Garnett*, 258 U.S. 130 (1922).

[27] The political parties and/or candidates distributed 23 premarked ballots. Often these ballots were "colored" or "striped" so that party workers at or near the polls could determine how a person was going to vote. Without the "proper" ballot, voters were sometimes prevented or discouraged from voting by intimidation and threats. A "shingle ballot" is one which is folded in such a manner as to contain additional inserted ballots.

[28] *Laws of Maryland*, 1890, Chapter 538, amended by Acts of 1892, Chapter 300.

[29] *Laws of Maryland*, 1914, Chapter 513, and *Laws of Maryland*, 1933, Chapter 228.

[30] *Laws of Maryland*, 1955, Chapter 300.

APPENDIX G: TABLE OF RELEVANT MARYLAND CASE LAW[31]

A. Election Procedures

Lexington Park Volunteer Fire Department v. Robidoux, 218 Md. 195, 146 A.2d 184 (1958) - sufficiency of notice and ballot question.

Mahoney v. Board of Supervisors of Elections of Talbot County, 205 Md. 380, 190 A.2d 110 (1954) - marks on ballots.

Wilkinson v. McGill, 192 Md. 387, 64 A.2d 266 (1949) - change in location of polling place after first notice of location.

Hammond v. Love, 187 Md. 138, 49 A.2d 75 (1946) - election judges failed to initial ballots.

Seyboldt v. Mayor and Common Council of Mount Ranier, 130 Md. 69, 99 A. 960 (1917) - clerical error and form of ballot.

Smith v. Hackett, 129 Md. 73, 98 A. 140 (1916) - polling place not within precinct.

B. Lever Machines

Fowler v. Board of Supervisors of Elections for Prince George's County, 259 Md. 615, 270 A.2d 660 (1970) - failure to "zero" out voting machines and candidates not properly listed.

McNulty v. Board of Supervisors of Elections for Anne Arundel County, 245 Md. 1,224 A.2d 844 (1966) - failure to cover unused levers or prevent voters from voting on unused levers.

C. Absentee Ballots

Pelagatti v. Board of Supervisors of Elections for Calvert County et al, 343 Md. 425, 682 A.2d 425 (1996) - some applications for absentee ballots failed to have signed affidavits.

Lamb v. Hammond et al., 308 Md. 286, 518 A.2d 1057 (1987) - timeliness of absentee ballots.

[31] The cases listed are decisions relevant to voting systems and procedures.

APPENDIX H: TABLE OF RELEVANT FEDERAL CASE LAW

Cane v. Worcester County, Maryland, 847 F. Supp. 369, *rev'd in part and aff'd in part*, 35 F.3d 921 (4th Cir. 1994) - challenge to the system used in Worcester County to elect county commissioners.

Marylanders for Fair Representation, Inc. v. Schaefer, 849 F. Supp. 1022 (1994) - citizens challenged apportionment of Maryland's state legislative districts.

Anne Arundel County Republican Central Committee v. State Advisory Board of Election Laws, 781 F. Supp. 394 (1991) - citizens challenge Maryland's congressional redistricting plan.

Dunn v. Blumstein, 405 U.S. 330 (1972) - Tennessee citizen challenged the constitutionality of the durational residency requirements to register to vote.

Maryland Committee for Fair Representation v. Tawes, 377 U.S. 656 (1964) - citizens challenged apportionment of Maryland's state legislative districts.

Reynolds v. Sims, 377 U.S. 533 (1964) - voters challenged the apportionment of Alabama's state legislative districts.

Wesberry v. Sanders, 376 U.S. 1 (1964) - voters challenged the apportionment of Georgia's Fifth Congressional District.

United States v. Classic, 313 U.S. 299 (1941) - election officials allegedly altered ballots and falsely certified the number of votes cast for certain candidates.

United States v. Mosley, 238 U.S. 383 (1915) - local election officials allegedly conspired to omit certain election results from the election returns certified to the state election board.

APPENDIX I: GLOSSARY OF SELECTED ELECTION TERMS[32]

Blank Vote -- represents the number of votes caused by individuals who voted for more than one candidate for a particular office. Under the Global ES 2000 System, a blank vote is the same as undervotes in other optical scan voting systems.

Canvass -- the entire process of vote tallying, vote tabulation, and vote verification or audit culminating in the production and certification of the official election results. § 11-101.[33]

Central Count -- a voting system where the ballots are not tabulated in the polling place but are delivered to a counting center for tabulation. Under this counting system, the voter is not afforded the opportunity to correct any ballot errors that may have been made since the tabulation is conducted after the voter has left the polling place.

Datavote -- a type of punch-card voting system. The voter records selections by punching holes in specific places on a paper computer card. In Maryland, only Montgomery County currently uses this voting system.

Direct Recording Electronic Voting System -- records votes by means of a ballot display provided with mechanical or electro-optical devices that can be pressed by the voter. The system processes the data by means of a computer program that records voting data and ballot images on internal memory devices. In Maryland, only Baltimore City currently uses this voting system.

Instant Runoff Voting -- requires the winner of an election to have the support of at least 50% of the votes cast for a particular office. If no candidate receives 50% of the vote, the ballots cast for the two candidates with the most votes are retallied and the candidate with the most votes is certified the winner.

Lever Machine -- a mechanical voting system where the voter pulls a lever adjacent to the candidate or question for whom the voter wishes to cast a vote. This type of voting system is currently used in Allegany, Dorchester, and Prince George's Counties but will be decertified as a matter of law in January 2001.

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[32] Article 33 contains definitions which should be read when interpreting Maryland law. Other terms defined herein are for the purpose of this Report.

[33] All statutory references are to Article 33 of the Annotated Code of Maryland, unless otherwise indicated.

No vote -- represents the number of voters not recorded as voting for a particular office. A "no vote" includes voters who deliberately did not cast a vote for a particular office, who voted for more than one candidate for a particular office, or who may not have had their vote accurately counted by the voting system utilized by the voter. A "no vote" is also known as "drop vote."

Optical Scanning Voting Systems -- a voting system where a voter completes a circle or arrow to cast a vote for a particular candidate or question. The ballot is fed into the optical scanner which scans and reads the ballot and stores the vote totals. Currently, nineteen (19) counties in Maryland use an optical scanning voting system.

Overvote -- represents the number of votes caused by individuals who voted for more than one candidate for a particular office.

Precinct Count -- a voting system where the ballots are tabulated at the polling place in the presence of the voter. This system allows for a voter to correct any mistakes as the voting system will notify the voter that an error has been detected.

Recount -- the process of retallying some or all of the votes cast for a particular public or party office in order to resolve a challenge to the vote count for an election. § 12-101.

Rank voting -- requires the voter to indicate a first and second choice for each public office. If no candidate receives a majority of the votes, the second choice votes cast would tallied and added to the initial total.

Undervote -- represents the number of voters who deliberatively did not cast a vote for a particular office or whose selection was not read or recorded by the voting system used by the voter.

APPENDIX J: ABBREVIATED BIBLIOGRAPHY

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National Association of Secretaries of State	http://www.nass.org
National Association of State Election Officials	http://nased.org
National Organization on Disability	http://www.nod.org

Table 1: PERCENTAGE OF NO VOTE FOR PRESIDENT BY SUBDIVISION*
(1980-2000)

Subdivision	1980	1984	1988	1992	1996	2000
Allegany	1.01	1.02	1.48	0.82	1.16	1.21
Anne Arundel	0.65	0.68	0.68	0.44	0.52	0.11
Baltimore City	1.51	1.36	1.73	0.92	0.69	0.72
Baltimore	0.80	0.66	0.80	0.51	0.69	0.53
Calvert	0.50	0.95	0.89	0.45	0.75	0.47
Caroline	1.10	1.10	0.75	0.55	0.93	0.47
Carroll	0.53	1.65	2.54	1.79	0.45	0.25
Cecil	0.64	0.74	0.74	0.39	0.85	0.48
Charles	2.87	0.40	0.69	0.51	0.62	0.37
Dorchester	2.18	1.92	1.96	1.55	0.75	0.41
Frederick	1.21	2.94	2.62	1.05	0.47	0.25
Garrett	0.49	1.05	1.74	0.51	0.86	0.45
Harford	2.51	2.78	7.64	1.47	0.62	0.27
Howard	0.57	0.50	0.86	0.70	0.65	0.20
Kent	0.99	2.19	2.32	0.95	0.74	0.43
Montgomery	1.49	1.40	1.57	0.47	0.98	0.76
Prince George's	0.90	1.12	1.00	0.74	0.86	0.70
Queen Anne's	1.09	0.63	0.81	0.32	0.35	0.33
St. Mary's	0.56	0.30	0.68	0.18	0.56	0.63
Somerset	2.31	2.44	1.55	1.02	0.94	0.92
Talbot	0.73	0.78	0.95	0.57	0.97	0.30
Washington	0.78	1.54	1.49	0.38	0.45	0.28
Wicomico	0.78	0.47	1.41	0.48	0.65	0.58
Worcester	0.78	0.73	1.07	1.57	0.53	0.41
MARYLAND	**1.142**	**1.167**	**1.495**	**0.691**	**0.732**	**0.518**

Legend

Automatic Voting Machine (Lever)	Datavote (Punch card ballot)
Optech/Globel ES Systems	CES Punchcard
AVC (Touchscreen)	Shoup (Lever)

* Percentage of "No Vote" for President represents the number of voters not recorded as voting for President in each subdivision divided by the total number of voters who voted in each of the designated Presidential elections. A "No Vote" includes voters who deliberately did not cast a vote for President, who voted for more than one candidate for President, or who may not have had their vote accurately counted by the voting system utilized by the voter.

In evaluating the information contained in this table, it is more appropriate to make comparisons horizontally (within jurisdictions) than vertically (between jurisdictions) to account for the socio-economic variables that exist among jurisdictions. Precinct level analysis is even more illuminating and instructive than this county level table.

Prepared by J.T. Willis from Presidential Elections in Maryland and official election information provided by the State Board of Elections and Local Boards of Elections. Variances in these base numbers may exist as a result of discrepancies between reports compiled and certified by the Local Boards of Elections and State Board of Elections. (2/28/01)

Table 2: Percentage of "No Vote" by State in the 1996 General Election*

State	Percentage of No Vote
Massachusetts	0.58
Nevada	0.72
MARYLAND	**0.73**
Minnesota	0.84
Kansas	0.94
New Jersey	0.94
Oklahoma	0.95
Vermont	1.10
Louisiana	1.14
Connecticut	1.28
Nebraska	1.36
Iowa	1.43
Alaska	1.46
Oregan	1.53
Michigan	1.62
South Dakota	1.67
Washington	1.74
Arizona	1.88
New York	1.91
Wyoming	1.98
North Dakota	2.00
NATIONAL AVERAGE	**2.04**
Virginia	2.09
Kentucky	2.18
Ohio	2.24
California	2.38
Delaware	2.38
District of Columbia	2.38
Illinois	2.42
Montana	2.43
Florida	2.58
West Virginia	2.58
Colorado	2.60
Indiana	2.72
Hawaii	2.73
New Hamphsire	2.85
Georgia	3.19
Idaho	3.65
Utah	3.67
New Mexico	4.08
South Carolina	4.33
Arkansas	n/a
Maine	n/a
Mississippi	n/a
Missouri	n/a
North Carolina	n/a
Pennsylvania	n/a
Rhode Island	n/a
Tennessee	n/a
Texas	n/a
Wisconsin	n/a

* The states without data do not collect this data on a statewide basis.

Table 3: NO VOTE FOR PRESIDENT BY SUBDIVISION*
(1980-2000)

Subdivision	1980	1984	1988	1992	1996	2000
Allegany	321	321	444	252	305	324
Anne Arundel	862	973	1068	816	893	229
Baltimore City	4075	3911	4101	2261	1278	1389
Baltimore	2256	1871	2307	1657	1863	1612
Calvert	55	133	157	105	179	141
Caroline	75	79	54	47	77	42
Carroll	174	611	1139	1003	238	160
Cecil	122	148	157	107	210	139
Charles	649	105	220	198	222	166
Dorchester	235	195	203	173	76	47
Frederick	479	1305	1340	692	307	197
Garrett	42	101	164	54	85	48
Harford	1311	1561	4853	1206	486	248
Howard	298	309	684	700	627	229
Kent	63	142	159	73	52	35
Montgomery	4038	4182	5109	1719	3329	2862
Prince George's	1755	2628	2245	1922	2074	1920
Queen Anne's	100	62	95	47	48	55
St. Mary's	90	53	140	46	133	188
Somerset	164	174	113	82	68	71
Talbot	80	89	117	78	126	46
Washington	306	635	615	178	190	134
Wicomico	172	114	369	146	179	185
Worcester	80	88	143	264	90	86
MARYLAND	**17802**	**19790**	**25996**	**13826**	**13135**	**10553**

Legend

Automatic Voting Machine (Lever)	Datavote (Punch card ballot)
Optech/Globel ES Systems	CES Punchcard
AVC (Touchscreen)	Shoup (Lever)

* "No Vote" for President represents the number of voters not recorded as voting for President in each subdivision. A "No Vote" includes voters who deliberately did not cast a vote for President, who voted for more than one for President, or who may not have had their vote accurately counted by the voting system candidate utilized by the voter.

In evaluating the information contained in this table, it is more appropriate to make comparisons horizontally (within jurisdictions) than vertically (between jurisdictions) to account for the socio-economic variables that exist among jurisdictions. Precinct level analysis is even more illustrative and instructive than this county level table.

Prepared by J.T. Willis from **Presidential Elections in Maryland** and official election information provided by the State Board of Elections and Local Boards of Elections. Variances in these base numbers may exist as a result of discrepancies between reports compiled and certified by the Local Boards of Election and State Board of Elections. (2/28/01)

TABLE 4: DATE JURISDICTIONS FIRST USED CURRENT VOTING SYSTEM

County	Current System	Year Implemented
Allegany	Automatic Voting Machine	1956
Anne Arundel	Optech III-P Eagle	1995
Baltimore City	AVC Advantage	1998
Baltimore County	Optech III-P Eagle	1996
Calvert	Optech III-P Eagle	1995
Caroline	Global ES 2000	1998
Carroll	Optech III-P Eagle	1994
Cecil	Optech III-P Eagle	1996
Charles	Optech III-P Eagle	1996
Dorchester	Automatic Voting Machine	1952
Frederick	Optech III-P Eagle	1994
Garrett	Optech III-P Eagle	1996
Harford	Optech III-P Eagle	1994
Howard	Optech II	1987
Kent	Optech III-P Eagle	1994
Montgomery	Datavote	1980
Prince George's	Automatic Voting Machine	1950
Queen Anne's	Global ES-2000	1996
St. Mary's	Optech III-P Eagle	1995
Somerset	Optech III-P Eagle	1998
Talbot	Optech III-P Eagle	1996
Washington	Optech III-P Eagle	1994
Wicomico	Optech III-P Eagle	1994
Worcester	Optech III-P Eagle	1995

Source: State Board of Elections.

TABLE 5: POLLING PLACE VOTING SYSTEMS IN MARYLAND, 1980-2000

County	Current System	Year Implemented	Prior System	Year Implemented	Prior System
Allegany	Automatic Voting Machine	1956			
Anne Arundel	Optech III-P Eagle	1995	Optech II	1990	Automatic Voting Machine
Baltimore City	AVC Advantage	1998	Automatic Voting Machine	Prior to 1980	
Baltimore County	Optech III-P Eagle	1996	Automatic Voting Machine	Prior to 1980	
Calvert	Optech III-P Eagle	1995	Automatic Voting Machine	1992	Shoup
Caroline	Global ES 2000	1998	Shoup	Prior to 1980	
Carroll	Optech III-P Eagle	1994	CES Punchcard	1984	Automatic Voting Machine
Cecil	Optech III-P Eagle	1996	Shoup	Prior to 1980	
Charles	Optech III-P Eagle	1996	Shoup	Prior to 1980	
Dorchester	Automatic Voting Machine	1952			
Frederick	Optech III-P Eagle	1994	CES Punchcard	1984	Automatic Voting Machine
Garrett	Optech III-P Eagle	1996	Automatic Voting Machine	Prior to 1980	
Harford	Optech III-P Eagle	1994	CES Punchcard	Prior to 1980	
Howard	Optech II	1987	Automatic Voting Machine	Prior to 1980	
Kent	Optech III-P Eagle	1994	Shoup	Prior to 1980	
Montgomery	Datavote	1980			
Prince George's	Automatic Voting Machine	1950			
Queen Anne's	Global ES-2000	1996	Shoup	Prior to 1980	
St. Mary's	Optech III-P Eagle	1995	Shoup	Prior to 1980	

County	Current System	Year Implemented	Prior System	Year Implemented	Prior System
Somerset	Optech III-P Eagle	1998	Shoup	Prior to 1980	
Talbot	Optech III-P Eagle	1996	Shoup	Prior to 1980	
Washington	Optech III-P Eagle	1994	Automatic Voting Machine	Prior to 1980	
Wicomico	Optech III-P Eagle	1994	Shoup	Prior to 1980	
Worcester	Optech III-P Eagle	1995	Shoup	Prior to 1980	

Source: State Board of Elections and Local Boards of Elections

TABLE 6: ABSENTEE BALLOT VOTING SYSTEMS IN MARYLAND, 1980-2000

County	Current System	Year Implemented	Prior System	Year Implemented	Prior System
Allegany	Datavote	1988	Paper ballot	Prior to 1980	
Anne Arundel	Optech III-P Eagle	1996	Optech II	1986	Datavote Punchcards
Baltimore City	Model -315, AIS Computer	1990	Paper Ballot	Prior to 1980	
Baltimore County	Optech IV-C	1994	Automatic Voting Machine[34]	Prior to 1980	
Calvert	Optech III- P Eagle	1995	Paper Ballot	Prior to 1980	
Caroline	Model ES-2000 Accu-vote	1998	Shoup	Prior to 1980	
Carroll	Optech III-P Eagle	1994	Datavote Punchcards	1984	Paper Ballot
Cecil	Optech III-P Eagle	1996	Shoup	Prior to 1980	
Charles	Optech III-P Eagle	1996	Shoup	Prior to 1980	
Dorchester	Paper Ballot	1952			
Frederick	Optech III-P Eagle	1994	CES Punchcard	1984	Automatic Voting Machine
Garrett	Optech III-P Eagle	1996	Automatic Voting Machine	Prior to 1980	
Harford	Optech III-P Eagle	1994	CES Punchcard	Prior to 1980	
Howard	Optech II	1987	Automatic Voting Machine	Prior to 1980	
Kent	Optech III-P Eagle	1994	Shoup	Prior to 1980	
Montgomery	Datavote	1980			

[34] When using an Automatic Voting Machine to tabulate absentee ballots, the Local Board of Elections would designate different individuals to serve as a ballot reader, a lever puller, and a watcher to transfer the voter's choices from a paper absentee ballot to the mechanical lever machine.

County	Current System	Year Implemented	Prior System	Year Implemented	Prior System
Prince George's	Optech IV-C250	1996	CES Print Counter	Prior to 1980	
Queen Anne's	Model ES 2000	1996	Shoup	Prior to 1980	
St. Mary's	Optech III	1995	Shoup	Prior to 1980	
Somerset	Optech III	1995	Shoup	Prior to 1980	
Talbot	Optech III-P Eagle	1996	Shoup	Prior to 1980	
Washington	Optech III-P Eagle	1994	Automatic Voting System	Prior to 1980	
Wicomico	Optech III-P Eagle	1994	Shoup	Prior to 1980	
Worcester	Optech III-P Eagle	1995	Shoup	Prior to 1980	

Source: State Board of Elections and Local Boards of Elections.

TABLE 7: SUMMARY OF EXPENDITURES BY LOCAL BOARDS OF ELECTIONS FOR VOTING SYSTEMS AND ELECTION DAY[35]

County	Lease/Own Voting System	If Lease, Date Lease Expires	Annual Payment for Voting System	Election Costs	FY 2001 Total Budget
Allegany	Own	n/a	n/a	$27,110	$194,347
Anne Arundel	Lease	2001	$256,000	$186,190	$1,417,550
Baltimore City	Own	n/a	$980,000[36]	$288,500	$2,629,520
Baltimore County	Lease	2001	$401,892	$366,620	$2,028,944
Calvert	Lease	2003	$43,200	$34,759	$82,645
Caroline	Own	n/a	$29,368[37]	$30,000	$152,126
Carroll	Lease	2001	$94,990	$22,500	$421,875
Cecil	Lease	2001	$144,750	$45,710	$205,676
Charles	Lease	2001	$61,500	$62,400	$291,350
Dorchester	Own	n/a	n/a	$3,500	$188,082
Frederick	Lease	2001	$116,523	$90,068	$289,817
Garrett	Lease	2003	$50,875	$17,662	$226,547
Harford	Lease	2000	$120,285	$57,000	$573,424
Howard	Own	n/a	n/a	$350,000	$923,947
Kent	Lease	2001	$35,500	$15,312	$177,580

35 Source: Local Boards of Elections and the Maryland Association of Counties. Election costs include expenses incurred from printing ballots, compensation for election judges, polling place rentals, and other election day costs.

36 Baltimore City obtained a loan of $6.5 million with $4.9 million for its electronic voting system. The loan was to paid in five annual installments ending in July 2002.

37 Caroline County purchased its voting system for $105,000. Annual payments include principal, software license fee, and interest.

County	Lease/Own Voting System	If Lease, Date Lease Expires	Annual Payment for Voting System	Election Costs	FY 2001 Total Budget
Montgomery	Own	n/a	n/a	$427,560	$2,282,610
Prince George's	Own/Lease[38]	n/a	n/a	$623,247	$1,538,830
Queen Anne's	Lease	2000	$30,518^	$14,055	$49,542
St. Mary's	Lease	2001	$60,495	$67,914	$130,438
Somerset	Lease	2003	$54,500^	$23,102	$253,837
Talbot	Lease	2004	$43,500	$20,000	$179,435
Washington	Lease	2001	$81,400	$74,891	$380,600
Wicomico	Lease	2001	$79,374	$57,744	$403,703
Worcester	Lease	2001	$53,000	$30,200	$347,088

^ Printing of ballots is included in annual lease payment.

[38] Prince George's County owns most of its polling place voting system but leases additional Automatic Voting Machines as needed.

Table 8: Cost Comparison of Leased Voting Systems in Maryland[1]

	Precincts	Number of Reg. Voters[2]	Voting Age Population[3]	Annual Lease Cost	Cost Per Precinct	Cost Per Reg. Voter	Cost Per Voting Age Pop.
Allegany	36	40,043	54,932				
Anne Arundel	166	264,663	358,007	$256,000	$1,542.17	$0.97	$0.72
Baltimore City	325	309,299	469,542				
Baltimore County	187	405,819	561,724	$401,892	$2,149.16	$0.99	$0.72
Calvert	17	39,494	52,211	$43,200	$2,541.18	$1.09	$0.83
Caroline	9	12,906	21,535				
Carroll	43	81,238	110,786	$94,990	$2,209.07	$1.17	$0.86
Cecil	14	40,660	60,196				
Charles	28	59,305	84,242	$61,500	$2,196.43	$1.04	$0.73
Dorchester	36	16,383	22,524				
Frederick	51	106,900	138,436	$116,523	$2,284.76	$1.09	$0.84
Garrett	19	15,434	21,243	$50,875	$2,677.63	$3.30	$2.39
Harford	57	118,118	157,267	$120,285	$2,110.26	$1.02	$0.76
Howard	85	140,526	178,422				
Kent	10	9,888	14,979	$35,000	$3,500.00	$3.54	$2.34
Montgomery	227	461,287	645,012				
Prince George's	199	351,863	582,506				
Queen Anne's	11	21,672	30,350	$30,518	$2,774.36	$1.41	$1.01
St. Mary's	20	45,158	62,198	$60,495	$3,024.75	$1.34	$0.97
Somerset	21	11,392	19,299	$54,500	$2,595.24	$4.78	$2.82
Talbot	16	20,937	26,304	$43,500	$2,718.75	$2.08	$1.65
Washington	43	69,422	97,625	$109,700	$2,551.16	$1.58	$1.12
Wicomico	34	42,528	59,064	$79,374	$2,334.53	$1.87	$1.34
Worcester	12	30,431	33,798	$53,000	$4,146.67	$1.74	$1.57
State of Maryland	**1,666**	**2,715,366**	**3,862,202**	**$1,612,852**			

[1] The Source of this Table is responses from Local Boards of Elections contained in Supplemental Volume I. Allegany, Dorchester, and Prince George's Counties use mechanical lever machines, most of which are owned and long been amortized. Montgomery County's Datavote voting system was purchased before 1980 and has long been amortized. Optical Scan voting systems were purchased by Caroline County in 1998 and by Cecil County in 1996. Caroline County's annual payments are $29,368 and end in FY2003. Cecil County paid a total of $144,750 in three installments. Baltimore City purchased a Direct Recording Electronic voting system in 1997 for $4.5 million which is being paid in annual loan installments ending in FY2002.

[2] As of October 13, 2000, the last date to register to vote for the general election held on November 7, 2000.

[3] Estimate as of July 1, 1999. The results of the 2000 Census will be available on or about April 1, 2001, and will provide more accurate information.

Table 9: Percent "No Vote" by Voting System (1980 - 2000)

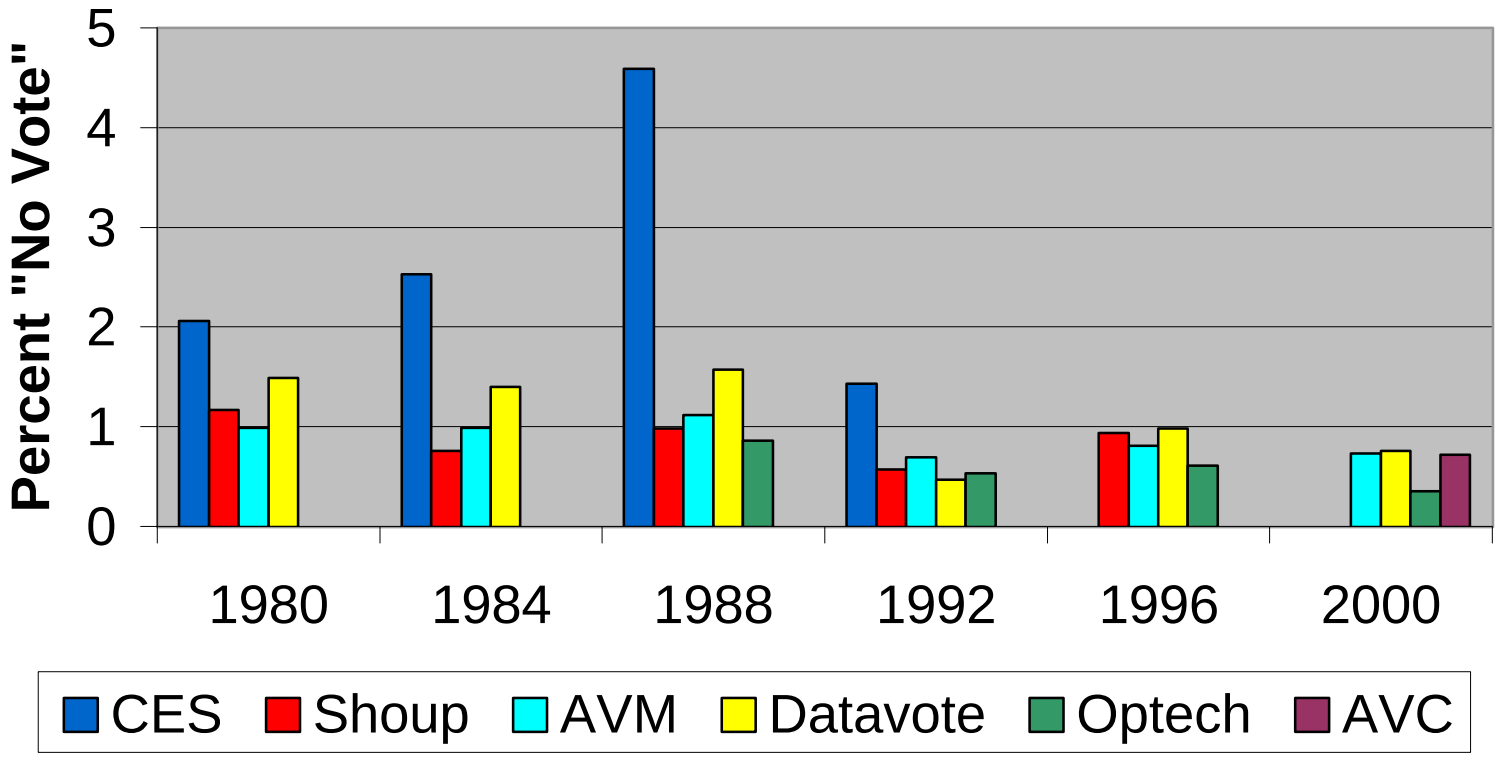


TABLE 12: PRINCE GEORGE'S COUNTY "NO VOTE" SELECTED PRECINCTS[39]

(Mechanical Lever Voting System)

Precinct	1992 Total No Vote	1992 Percent No Vote	1996 Total No Vote	1996 Percent No Vote	2000 Total No Vote	2000 Percent No Vote
5-7[40]	33	0.66%	119	5.86%	5	0.24%
6-6	69	5.40%	5	0.50%	2	0.16%
6-20	2	0.16%	9	0.56%	108	5.46%
7-6[41]	10	0.42%	9	0.80%	94	7.51%
7-11[42]	18	0.36%	70	3.48%	5	0.20%
10-1	4	0.31%	77	11.77%	2	0.29%
11-2	179	8.51%	14	0.60%	7	0.24%
12-5	7	0.42%	72	4.72%	0	0.00%
13-4[43]	37	0.83%	28	0.52%	12	0.18%
14-7	137	16.57%	2	0.25%	2	0.22%
16-5	24	1.53%	25	1.73%	117	7.14%
17-11	9	0.76%	12	1.13%	200	15.71%
Countywide	**1922**	**0.74%**	**2074**	**0.86%**	**1920**	**0.70%**

[39] The selected precincts are the four precincts in each presidential election that experienced the most number of "no votes" of all precincts in Prince George's County for that year.

[40] Precinct 5-7 was formed from parts of precincts 5-2 and 5-5 in 1993. The 1992 total and percent of "no votes" is the combined totals from those precincts.

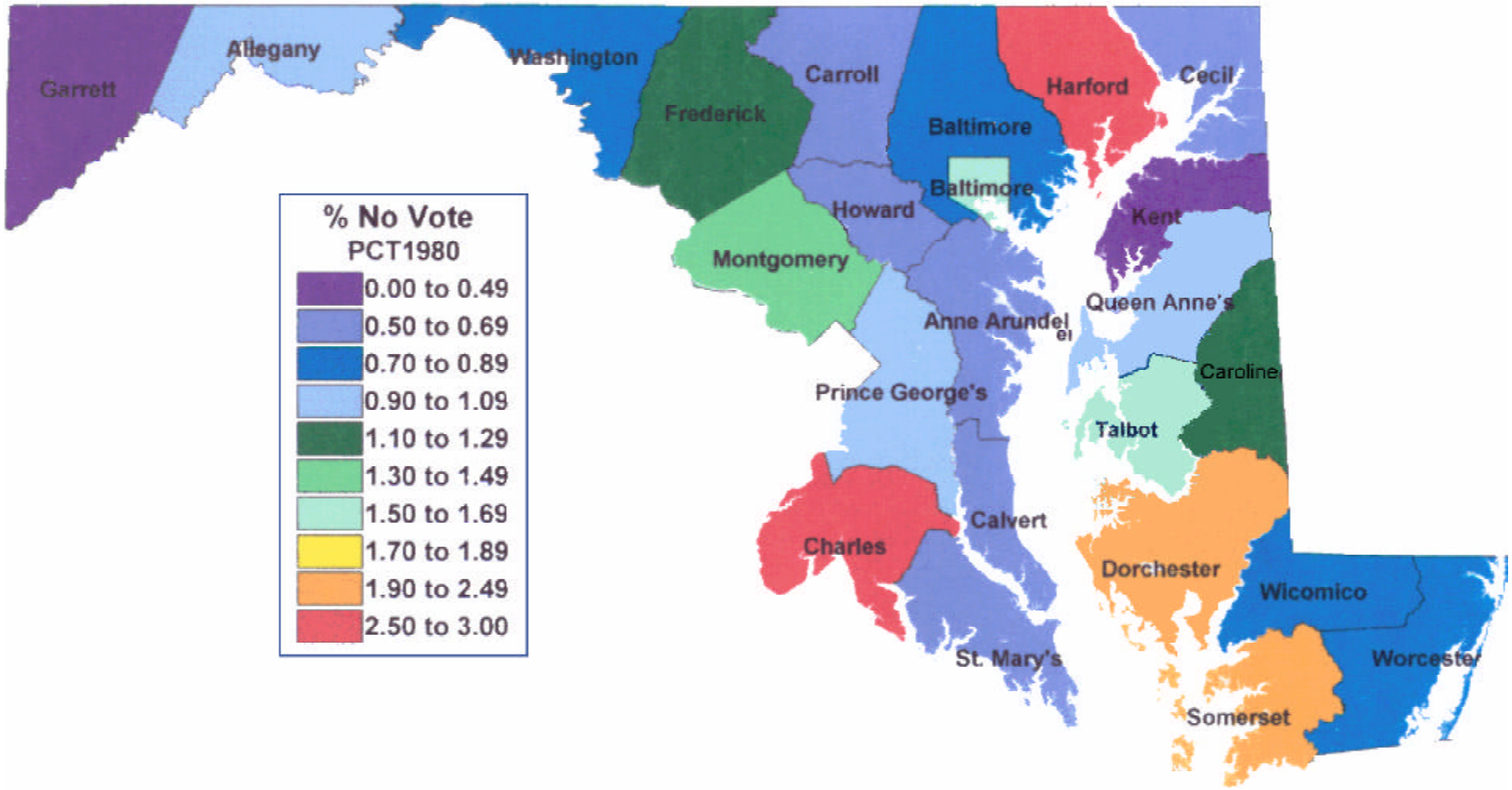
[41] Precinct 7-6 was split to create additional precincts 7-11 and 7-16 in 1993. The 1996 and 2000 numbers are for precinct 7-6 only.

[42] Precinct 7-11 was formed from parts of precincts 7-1 and 7-9 in 1993. The 1992 total and percent of "no votes" is the combined total from those precincts.

[43] Precinct 13-4 was split to create additional precincts 13-11, 13-12, and 13-13 in 1993. The 1996 and 2000 numbers are for precinct 13-4 only.

Maryland "No Vote" Percentages by County

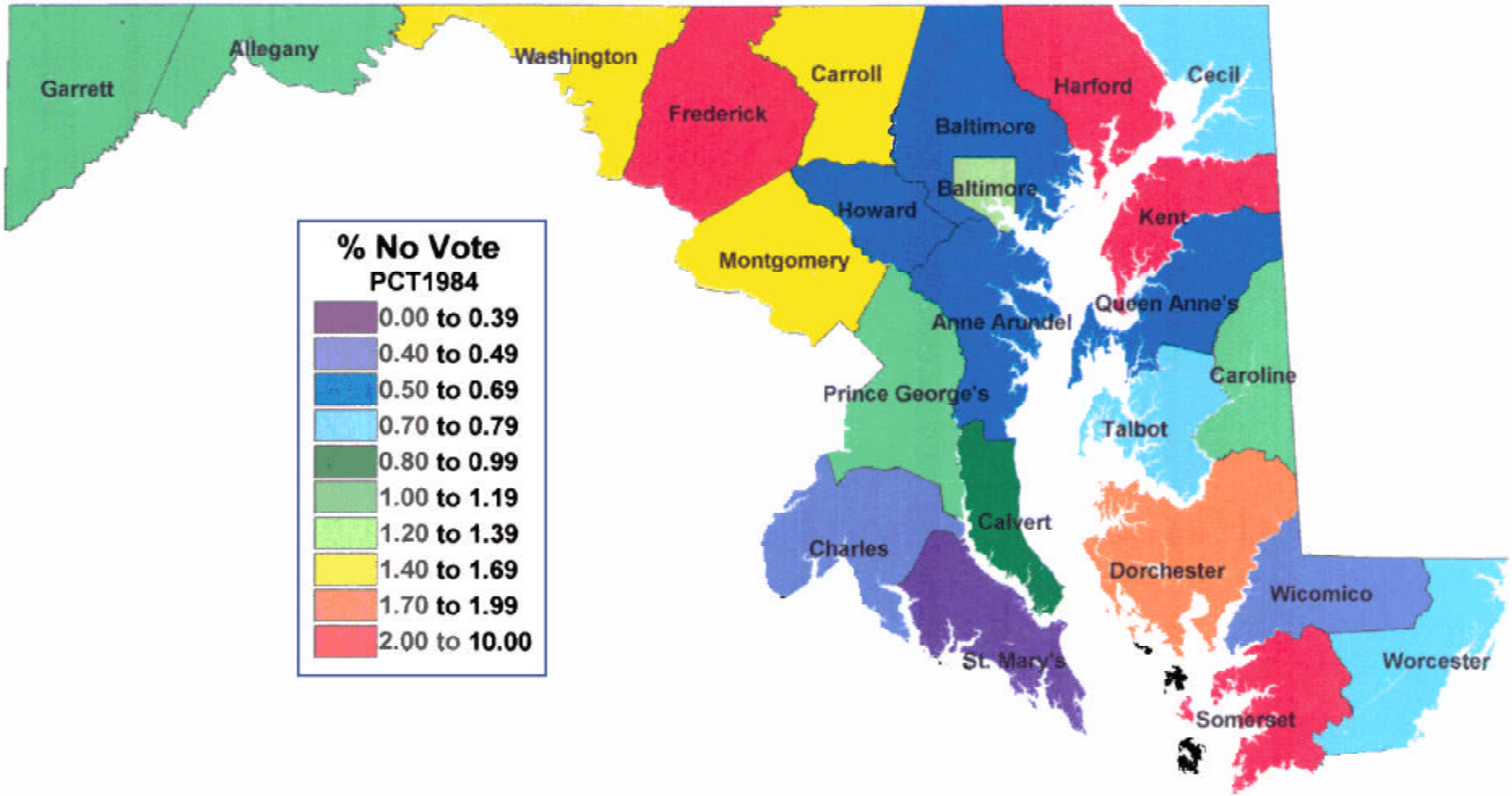
1980 General Election



Source: J. T. Willis from *Presidential Elections in Maryland*
Official election information provided by the State Board of Elections and Local Boards of Elections

Maryland "No Vote" Percentages by County

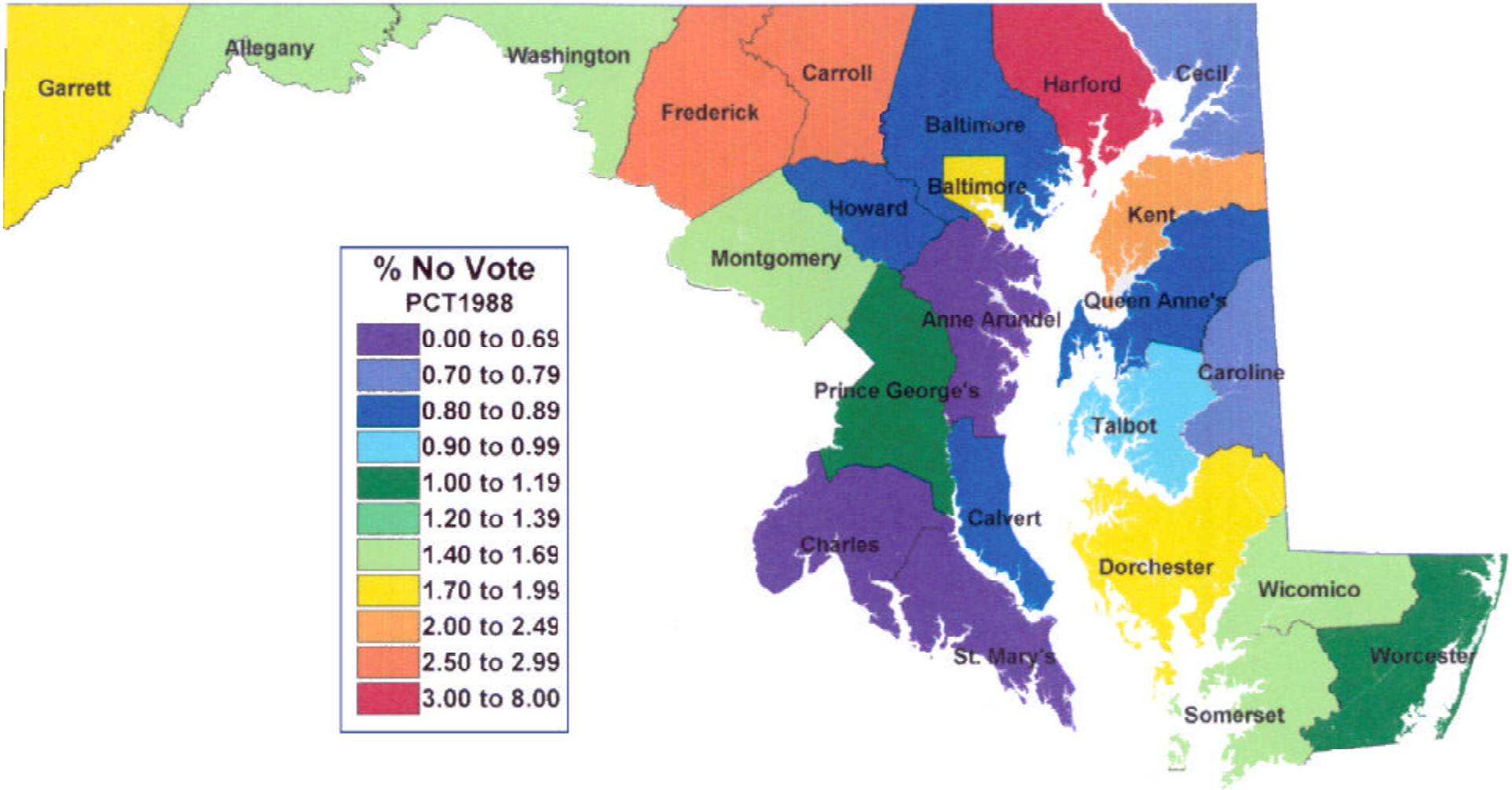
1984 General Election



Source: J. T. Willis from *Presidential Elections in Maryland*
Official election information provided by the State Board of Elections and Local Boards of Elections

Maryland "No Vote" Percentages by County

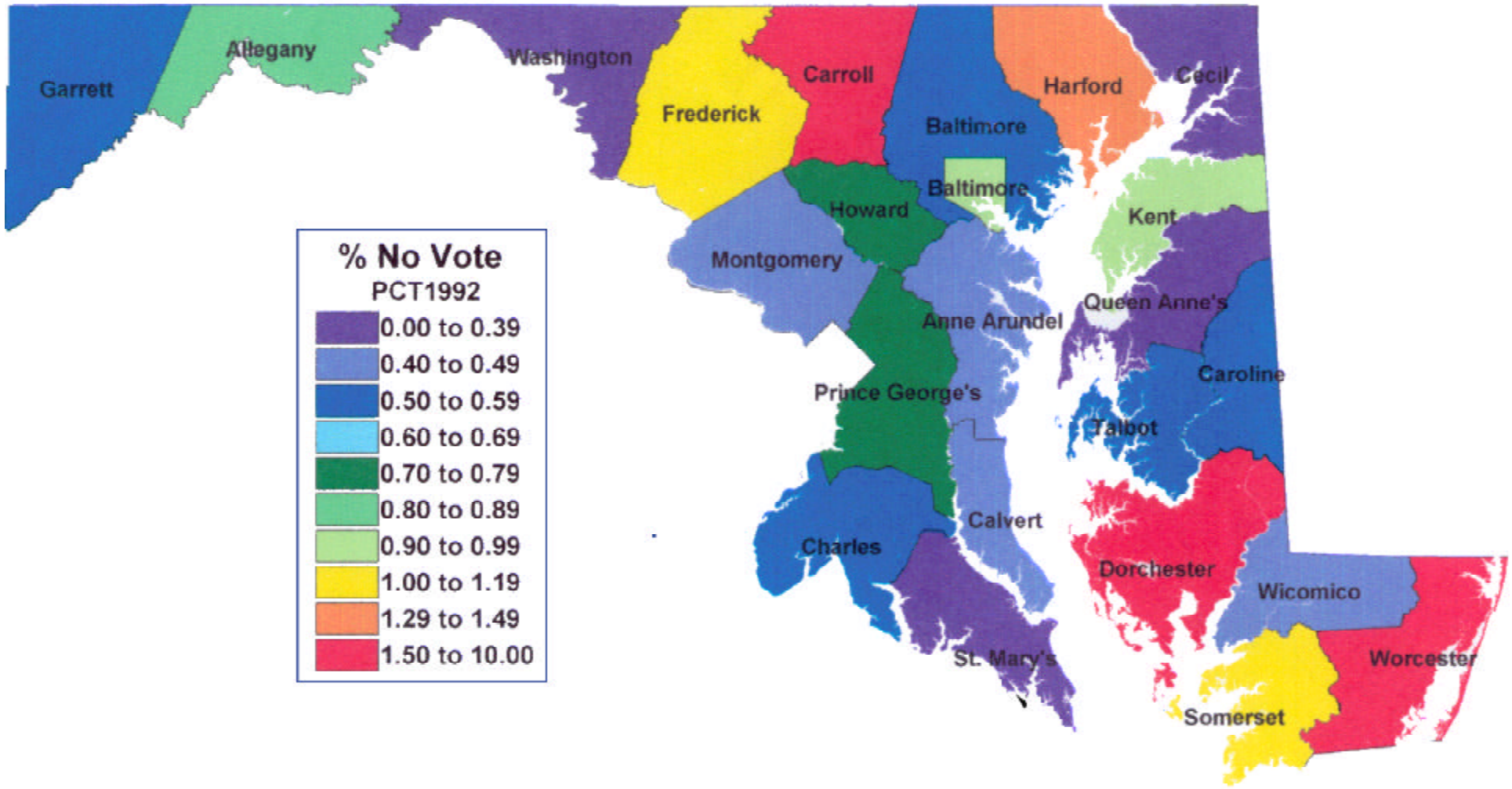
1988 General Election



Source: J. T. Willis from *Presidential Elections in Maryland*
Official election information provided by the State Board of Elections and Local Boards of Elections

Maryland "No Vote" Percentages by County

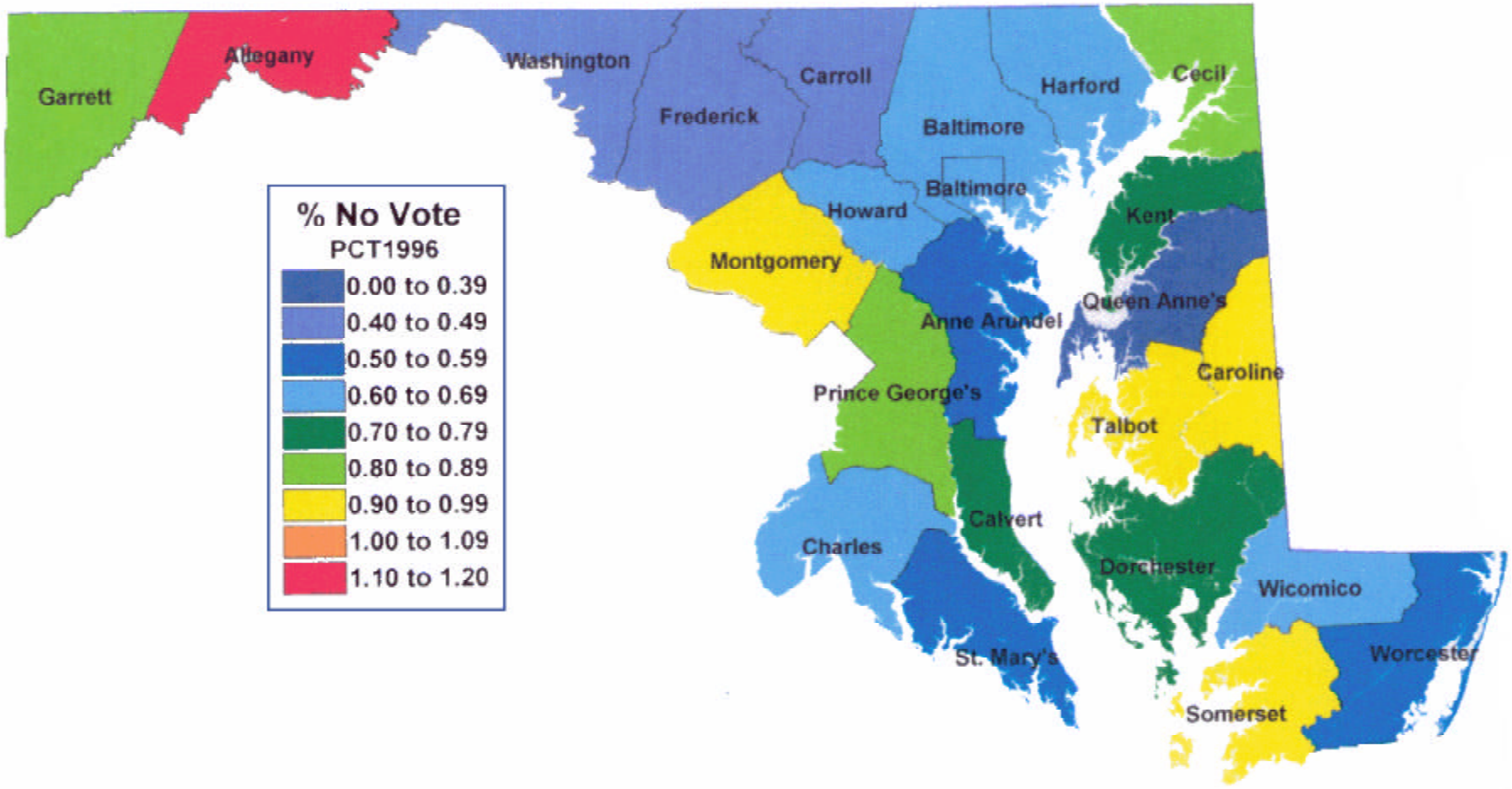
1992 General Election



Source: J. T. Willis from *Presidential Elections in Maryland*
Official election information provided by the State Board of Elections and Local Boards of Elections

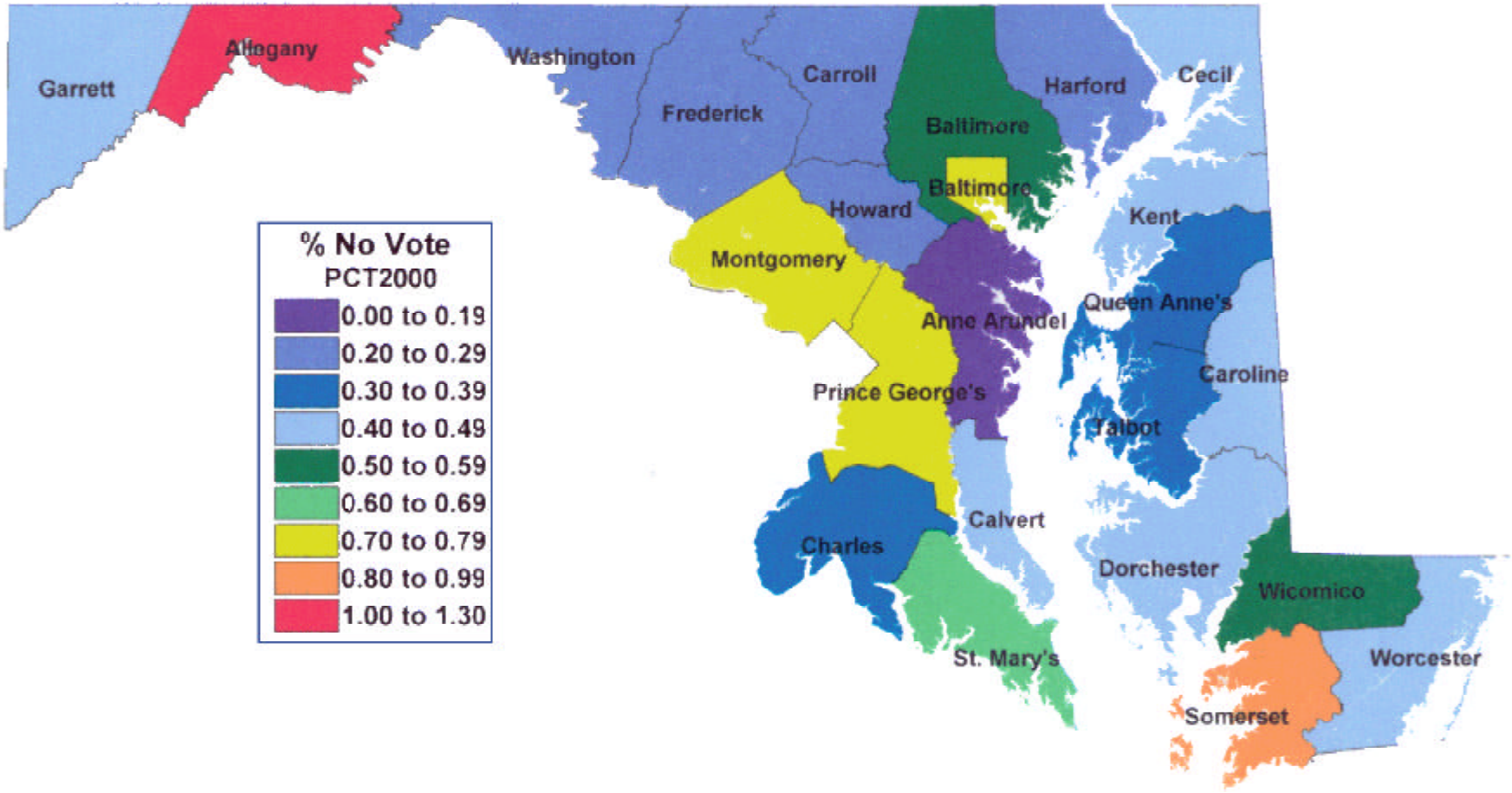
Maryland "No Vote" Percentages by County

1996 General Election



Source: J. T. Willis from *Presidential Elections in Maryland*
Official election information provided by the State Board of Elections and Local Boards of Elections

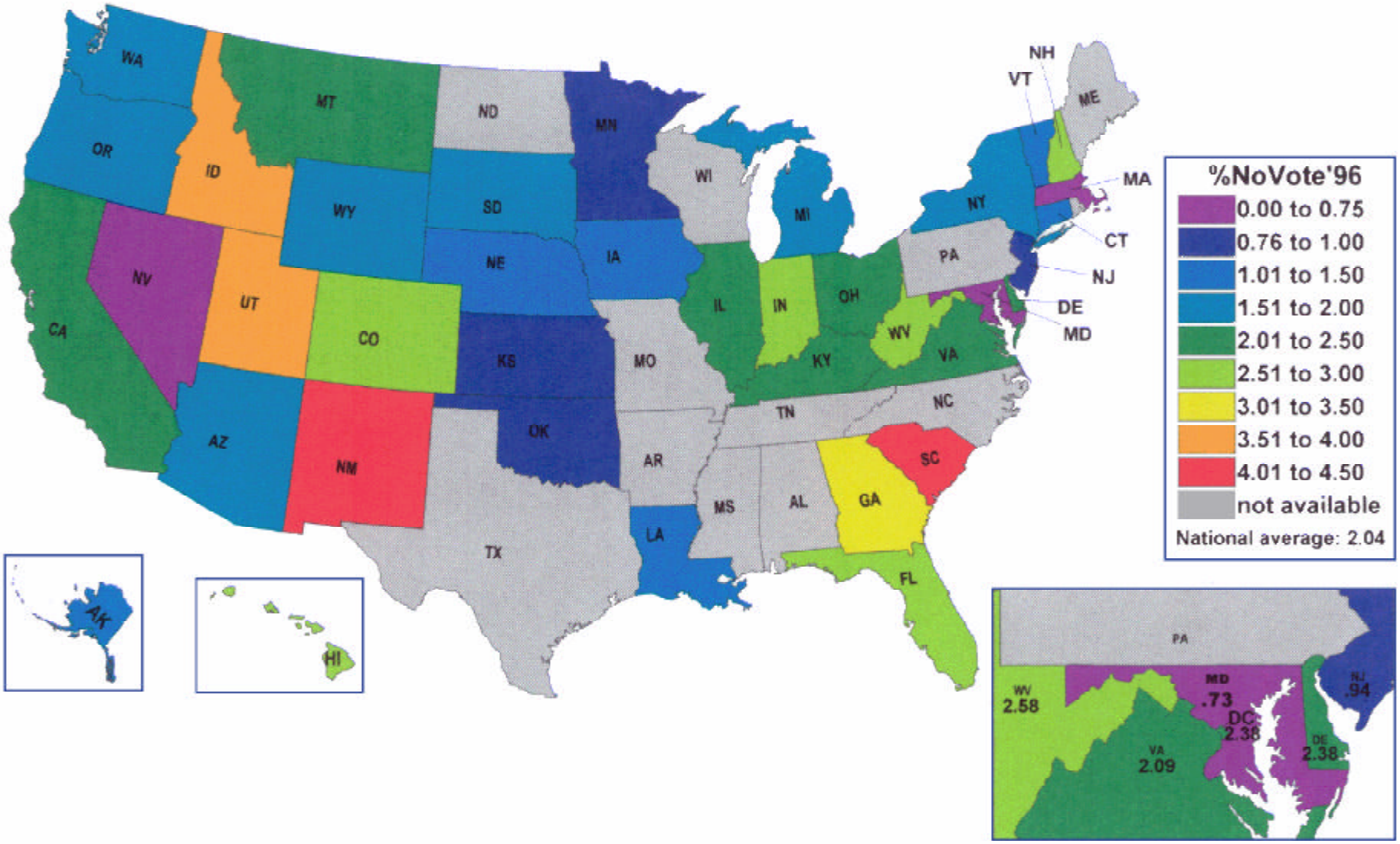
Maryland "No Vote" Percentages by County
2000 General Election



Source: J. T. Willis from *Presidential Elections in Maryland*
Official election information provided by the State Board of Elections and Local Boards of Elections

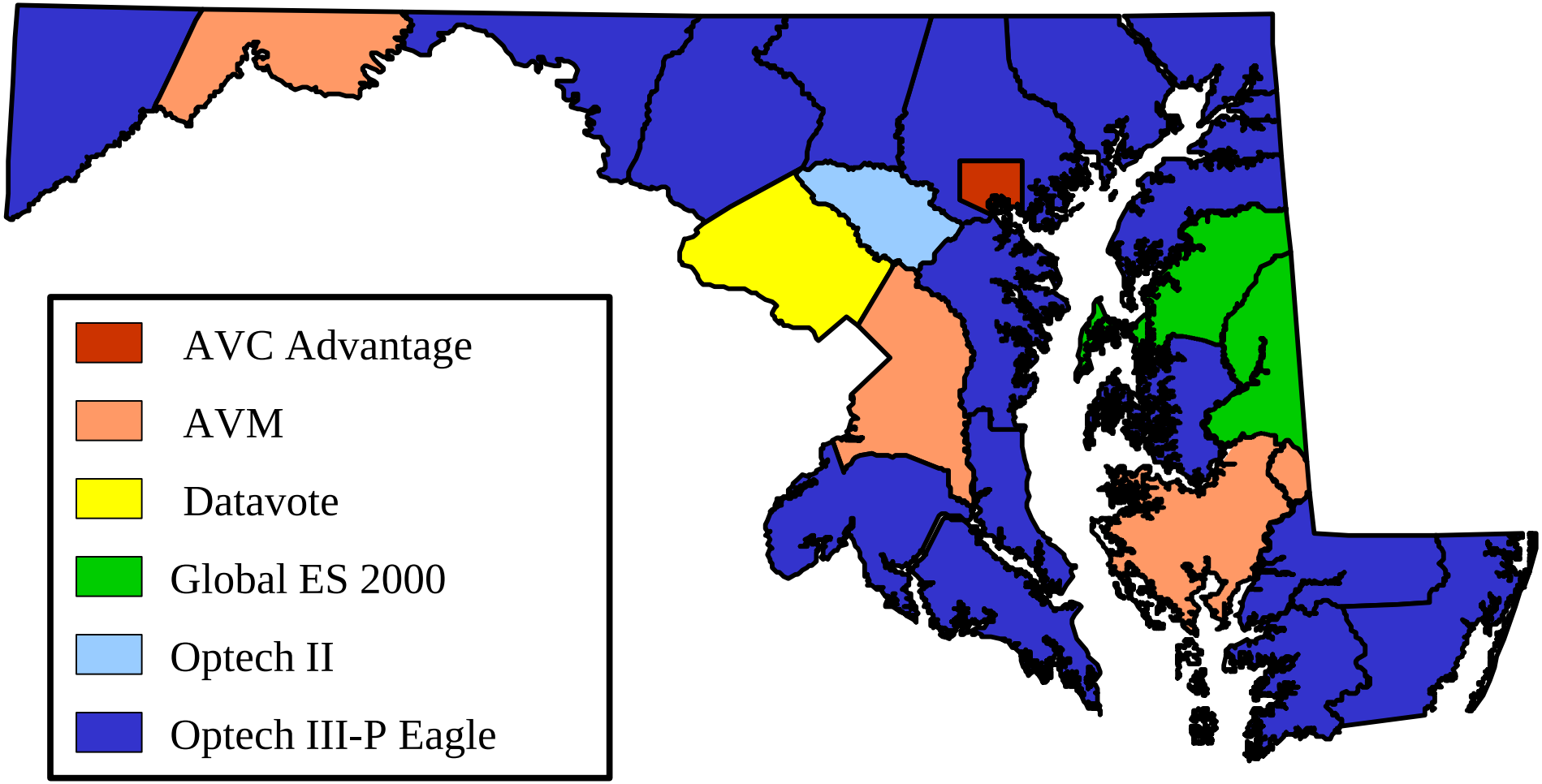
National "No Vote" Percentages by State

1996 General Election



Source: Election Data Services, Inc.

Map 8: Voting Systems in Maryland*



*Voting systems used in the 2000 Presidential Election

Source: State Board of Elections and Local Boards of Elections